

EXT. SARSÆ
JAM. CO.

EXT. SARSÆ
JAM. SIMP.

EXT. SARSÆ
JAM. LIQ^D.

DEC. SARSÆ
JAM. SIMP. 1-7.

DEC. SARSÆ
JAM. COMP. 1-7.

ALL FROM FINEST RED
JAMAICA

SARSAPARILLA ROOT
PREPARED IN VACUO BY
SPECIAL PROCESS.

FINEST SOLUBLE ESSENCES

OF LEMON, GINGER,
GINGER ALE (BELFAST),
ORANGE CHAMPAGNE,
KOLA CHAMPAGNE,
AND SEVERAL HUNDRED OTHERS.

PURE
CONCENTRATED
FRUIT ESSENCES
OF THE FINEST QUALITY
AND
HIGHEST DEGREE OF
CONCENTRATION.

STEVENSON



HOWELL'S SPECIALITIES.



STANDARD

VACUUM-PREPARED

JAMAICA SARSAPARILLA

PREPARATIONS



ESSENTIAL OILS

OF GUARANTEED PURITY



PURE ESSENCES

OF EVERY DESCRIPTION

SAMPLES, QUOTATIONS, AND FULLEST DIRECTIONS—

FOR USE UPON APPLICATION.

ESSENTIAL OILS

OF GUARANTEED PURITY
AND
EXCEPTIONAL QUALITY.

ALMONDS
ANISEED
BERGAMOT

CARAWAY
CHAMOMILE
CARDAMOMS
CASCARILLA

CASSIA
CEDAR-WOOD
CINNAMON

CITRONELLA
CLOVES
CORIANDER

CUBEBS
EUCALYPTUS GLOBULUS
GERANIUM

GINGER
HOPS

JUNIPER
LAVENDER
LEMON

LIMES
NEROLI
NUTMEGS

ORANGE, SWEET
ORANGE, BITTER
OTTO OF ROSE

PATCHOULI
PEPPERMINT

PETIT-GRAIN
PIMENTO
ROSEMARY

SANDAL WOOD
SASSAFRAS
SPEARMINT

TANGERINE
THYME
WINTERGREEN

YLANG-YLANG
&c. &c. &c. &c.

STANDARD WORKS, 95^A SOUTHWARK ST., LONDON, S.E.
AND 128 HOPE STREET, GLASGOW.

20 HIGHEST AWARDS.

Pears' Soap

Soap Makers
by Appointment to



H.R.H.
The Prince of Wales.

RETAIL PRICES.	6d.	SIZE, unscented	-	-	-	4s.	WHOLESALE PRICES.
	1s.	„	all shapes, Washing or Shaving			8s.	
	1s.6d.	„	Ditto		ditto	12s.	
	2s.6d.	„	(The Washing Tablets are perfumed with Otto of Roses)			20s.	
	<hr/>						
TRANSPARENT GLYCERINE		2s.	per Box of 3 Tablets	16s.	Per dozen Boxes.		

DISCOUNT of 20 per Cent.
On all ORDERS of NOT LESS than **£5.**

(GROSS TRADE-PRICE VALUE.)

If accompanied by Remittance,

[Lesser Quantities 15 per Cent. Discount only.]

IMPORTANT STATEMENT.

No Dealer in the Kingdom, "Wholesale or Retail," for any quantity whatever obtains more than the above **20 PER CENT.** Discount.

(Signed), *A & F Pears*

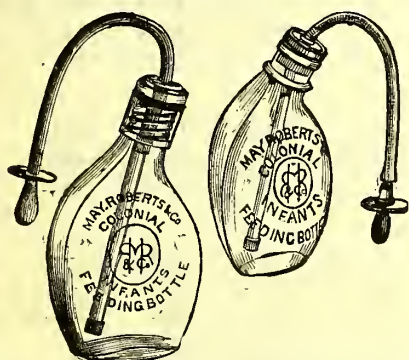
71-75, NEW OXFORD STREET, LONDON, W.C.

CAN YOU BUY THEM CHEAPER?

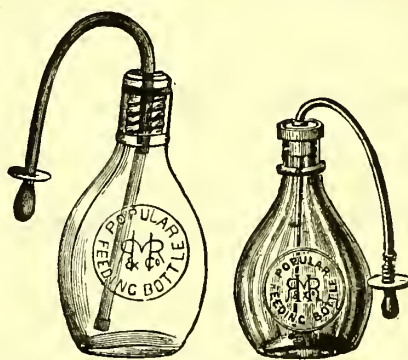
£1 worth or more, 5% disct.

£5 worth or more, 5% disct. & Carriage Paid.

COLONIAL



POPULAR



FEEDING BOTTLES.

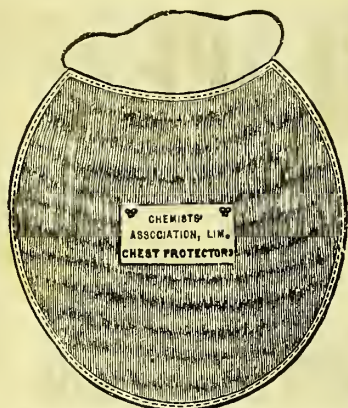
If with White Glass Bottles, 2/ gross extra.

	Each in Card Box.	In Boxes of 1 Dozen.	Loose in Cask (free).
	Per Gross.	Per Gross.	Per Gross.
Green Glass, Wood Top, White Fittings	34/	28/	23/
Do. do. Black Fittings	37/	31/	26/
Do. Screw Glass, White Fittings	39/	33/	29/
Do. do. Black Fittings	42/	36/	32/

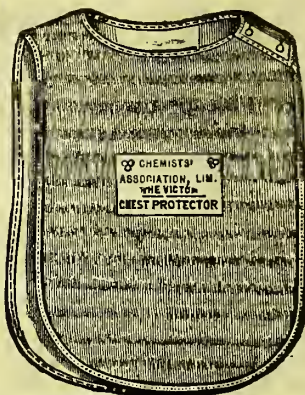
MAY, ROBERTS & CO., LONDON.

Telegraphic Address—"FEEDING BOTTLES LONDON."

PRICE LIST OF DRUGGISTS' SUNDRIES, &c., POST FREE.



CHEST PROTECTORS AND RESPIRATORS.



CHEST PROTECTORS.

FELT (SCARLET)—			No.	0	1	2	3	4	5	6	
SINGLE	5/-	6/3	7/8	9/-	11/6	15/-	20/-	per dozen.
DOUBLE	11/6	14/-	18/-	22/-	26/6	35/-	44/-	"
"THE ECLIPSE" (VEST SHAPE)			—		17/6	23/6	31/6	39/-	48/-	56/-	"

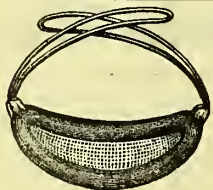
NATURAL WOOL—			No.	0	1	2	3	4	5	6	
SINGLE	5/6	6/9	8/6	10/-	12/6	16/6	22/-	"
DOUBLE	12/6	15/6	20/-	24/-	29/-	39/-	48/6	"
"THE ECLIPSE" (VEST SHAPE)			—		19/3	26/-	34/6	43/-	53/-	62/-	"

CHAMOIS and FLANNEL—			No.	0	1	2	3	4	5	6	
SINGLE	5/3	8/2	11/-	12/10	15/3	19/-	—	"
DOUBLE	—	19/-	23/9	29/6	36/-	46/-	—	"
"THE ECLIPSE" (VEST SHAPE)			—		26/-	35/-	47/-	58/-	72/-	84/-	"

SAMPLES ON APPLICATION.

Subject to Special Discounts as under—

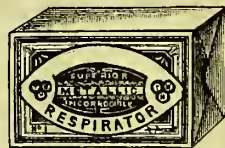
5 per cent. on orders of less than £5 worth.	15 per cent. on orders of £25 worth and upwards.
10 " " " £10 worth and upwards.	20 " " " £50 " " "



RESPIRATORS.

NON-CORRODIBLE METALLIC.

LADIES' OR GENTLEMEN'S (as Illustration).



No.	1	2	3	4	5	6	7	8	9		
Per doz.	7/6	11/6	13/3	19/-	22/-	28/-	42/-	47/-	53/-		
				per doz.						per doz.	
CORK, One Shilling	5/9	PATTISON'S BEST QUALITY CORK, 1/6					10/-	
COGHILL'S NICKEL-PLATED			...	15/-	PERFECTION PERMANENTLY MEDICATED CELLULOID					...	16/-
„ VULCANITE	42/-	ROOFF'S	...	18/6, 24/-, 33/-, 46/-	nd	61/-		
PATTISON'S CORK, 1/-	6/-	ROBERTS' PATENT INVISIBLE					...	15/-

N.B.—A Mahogany Glass Show Case presented with first orders of not less than £2 assorted.

Subject to Discounts as under—

5 per cent. for orders of less than £2 worth.	12½ per cent. for orders of £10 worth and upwards.
10 " " " £5 worth and upwards.	15 " " " £25 " " "
20 per cent. for orders of £50 worth and upwards.	

THE CHEMISTS' ASSOCIATION, LIM.

Telegraphic Address—
"BEATROP LONDON."

CURTAIN ROAD, LONDON.

Telephone No.
11,301.

CHOLERA!!

The following lines will be found by Chemists to have a ready sale at the present time :—

CARBOLIC DISINFECTING POWDER,

Containing 15 per cent. Carbolic Acid, packed in handsomely decorated tins, with sprinkler lids.

6d. (1-lb. size)	per dozen	3/9	} Subject to 5 per cent. discount for monthly account.
1s. (2-lb. size)	„	6/9	

CARBOLIC ACID,

Pale-coloured transparent acid put up in new registered bottles (Registered No. 176,457).

6d. (6-oz. size)...	...	per dozen	3/3	} Subject to 5 per cent. discount for monthly account.
1s. (16-oz. size)	...	„	6/3	

CAMPHOR SMELLING SALTS,

In actinic green smellings, packed in $\frac{1}{2}$ -dozen drop-front outers for standing on counter.

1s.	per dozen	6/-	} Subject to 5 per cent. discount for monthly account.

CUT PRICES FOR ENEMAS.

Seamless rubber (Black, Green, or Red), highly enamelled, each in cedar-wood slide-lid boxes with leather shield and vagina-pipe. These Enemas are made of the best rubber, and will not split.

COMPLETE, 29/8 PER DOZEN, NET.

THE CHEMISTS' ASSOCIATION, LIM.

Telegraphic Address—
"BEATROP LONDON."

CURTAIN ROAD. LONDON.

Telephone No.
11,391.

THOMAS TYRER & CO.

Manufacturers of General and Pharmaceutical Chemicals,
Stirling Chemical Works, Abbey Lane, Stratford, London, E.

FROM WHOM WHOLESALE CHEMISTS AND SANITARY AUTHORITIES MAY OBTAIN SUPPLIES.

ANTISEPTICS & DISINFECTANTS

ACIDS and the SALTS of
BENZOIC, BORIC, CARBOLIC, SALICYLIC,
AND SULPHUROUS ACIDS.

THE MOST EFFECTIVE GERMICIDE:—

MERCURY PERCHLORIDE

(HgCl_2),

CORROSIVE SUBLIMATE.

THE DOUBLE CYANIDE OF ZINC & MERCURY.

MANGANATES AND PERMANGANATES.

LIME. POTASS. SODA.

THIOCAMF

(SULPHO-CAMPH., as "The Chemist and Druggist" terms it. See No. 646, September 3, pp. 361-62).

(Dr. J. EMERSON REYNOLDS'S PATENT).

BOTTLES, 2/- SPRINKLERS (Aromatised), 1/-

DISCOUNT ACCORDING TO QUANTITY.

SOLE MANUFACTURERS—

THOMAS TYRER & CO., STRATFORD, LONDON, E.

USEFUL DURING CHOLERA EPIDEMIC.

READY-MADE MUSTARD PLASTER (SEABURY'S).

Spread on strong cotton cloth, also on paper, ready for use at any moment, *by simply dipping the plaster into water until perfectly wet.*

Our Mustard Plaster is a decided improvement over all other manufactures, the mustard being manipulated in such a manner as to exclude all the moisture. It is always reliable, conforms quickly to the part, and when thoroughly wet does not break into pieces, as is the case with all other mustard plasters. It does not crack or peel off, and can be removed without soiling the skin or linen.

Being manufactured wholly of pure mustard, we guarantee them to be absolutely free from Croton Oil, or other dangerous substitutes that are often employed to induce intense irritation. To insure greater efficiency, and to guard against the injurious effects of dampness, we wrap our mustard plasters in waterproof paper.

MUSTARD PLASTERS SPREAD ON CLOTH.

		£	s.	d.
100 Plasters in an Oblong Decorated Tin Box, per doz.	..	..	4	0
10 " " Flat " " " " " " " "	..	..	0	10
6 " " Round " " " " " " " "	..	..	0	6
3 " " " " " " " " " " " "	..	..	0	3
Half Yard Rolls, 6 in. wide " " " " " " " "	..	..	0	6
1 " " 6 " " " " " " " "	..	..	0	10
5 " " 12 " " " " " " " "	..	..	4	0

HALF STRENGTH MUSTARD PLASTERS.

On Paper Only.

10 Plasters in Flat Decorated Tin Box, per doz.	0	7	0
---	----	----	---	---	---

The Plasters are intended to meet the wants of persons of specially sensitive skins, who cannot endure the active irritation of full strength.

MUSTARD PLASTERS SPREAD ON PAPER

		£	s.	d.
100 Plasters in an Oblong Decorated Tin Box, per doz.	..	..	3	0
50 " " " " " " " " " " " "	..	..	1	10
10 " " Flat " " " " " " " "	..	..	0	7
Yard Rolls, 6 in. wide " " " " " " " "	..	..	0	7
5 Yard Rolls, 12 in. wide " " " " " " " "	..	..	3	0

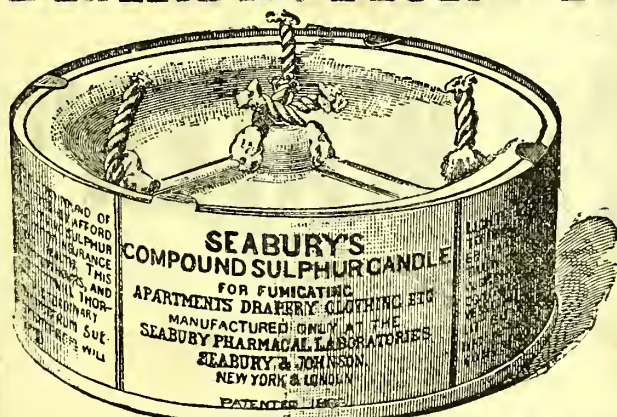
**SEABURY'S MUSTARD PLASTERS
ARE THE BEST.**

SPECIAL NOTICE.

Mustard Plasters should always be kept in a perfectly dry place, as it is well known that mustard quickly releases its essential or medicinal properties to moisture.

SUBJECT TO DISCOUNT.

DISINFECTION BY FUMIGATION.



To meet the growing demands for convenient methods of disinfecting apartments, clothing, &c., by sulphur fumes,

**NOTHING EVER DEvised EQUALS
SEABURY'S
SULPHUR CANDLES**

(PATENTED 6407).

Will destroy disease germs after infectious diseases, in vacated apartments or hospital wards, also bedding, clothing, and drapery.

Will destroy noxious vapours from sewers, cesspools, &c.

Will destroy insect pests, and other vermin.

These candles afford the only safe means of burning sulphur indoors, on board ship, &c., and are used and approved by Boards of Health and Sanitary Authorities in various parts of Great Britain and America, and were used to fumigate the Royal Courts of Justice, the Committee Rooms of the House of Commons, and the War Office after the Influenza epidemic.

One candle will burn for two hours, and thoroughly disinfect a room of ordinary size. Price 8/ per dozen.

For Mild Disinfection or Deodorisation use

SEABURY'S "HYDRONAPHTHOL" PASTILLES.

(TRADE MARK.)

These Pastilles are a combination of "Hydronaphthol" with fragrant gums and perfectly harmless materials to promote combustion. Each Pastille will burn for about thirty minutes, and will not only deodorise the room in which it is burned, but will drive out flies and other insect pests. The Hydronaphthol is volatilised by the heat and recrystallises in air, being deposited on walls and draperies, whence it is subsequently taken up by the humidity of the atmosphere, thus furnishing lasting sources of disinfection. Twelve pastilles in a decorated tin box. Price 8/ per dozen.

Manufactured by **SEABURY PHARMACAL LABORATORIES, New York.**

SEABURY & JOHNSON, Chemists, 46 JEWIN STREET, LONDON, E.C.
NEW YORK and HAMBURG.

DUSSEK BROS. & COMPANY'S SANITARY FLUID (MILKY)

(Soluble in Water),

CARBOLIC ACIDS & POWDERS,

OF ALL STRENGTHS.

Packed in Casks, Bottles, Bags, or Packets.

Write for Prices, stating quantity required, before buying elsewhere, to

DUSSEK'S WHARF, VERNEY ROAD, S.E.

TELEPHONE NO. 4833.

TELEGRAMS—"DUSSEK LONDON."

Manufacturers also of Petroleum Jelly, Dubbin, White Oils, Spirits of Tar and Rosin, Sheep Dip, Greases, Creosotes, Varnish, Pitch (all kinds), Brunswick and Berlin Black, &c., &c.

WOODWARD'S

"GRIPE

TRADE



TRADE MARK.

WATER"

MARK.

NOTICE

The Proprietor guarantees
that
"WOODWARD'S GRIPE WATER"
contains NONE of the
SCHEDULED POISONS.

FOR WHOLESALE AND SHIPPING TERMS APPLY

THE PROPRIETOR, CHAUCER STREET, NOTTINGHAM.

CHOLERA!

The best preventative
against
CHOLERA
is

Dr.
Von Esmarch
found in Professor
Koch's Laboratory
that CREOLIN 1 per
mille killed the Cholera
Bacillus in 10 minutes,
whereas Carbolic
Acid took four
days.

Dr.
Eisenberg's
researches prove
that the Cholera
Bacillus cannot live
in

**JEYES'
FLUID.**

Should
be used as
a Disinfectant
against

CHOLERA.

SAMPLES, MEDICAL PAMPHLETS, PRESCRIPTION FORMULARY, FREE ON REQUEST.

JEYES' SANITARY COMPOUNDS COMPANY

(LIMITED),

43 CANNON STREET, LONDON, E.C.

EXCHANGE COLUMN.

This Section of "The Chemist and Druggist" must be closed for press by Wednesday morning's post of each week. Remittances payable to EDWARD HALSE.

TERMS.

Advertisements in this department must be paid for in advance. From this rule no deviation can be made. Insertions are charged at the rate of $\frac{1}{2}$ d. per word, provided the advertiser attaches his name and address, for each word of which he must also pay at the same rate; or if he pays 1d. per word his name and address will be registered and a figure attached to his advertisement. All correspondence referring to that figure must be addressed to "The Publisher of the CHEMIST AND DRUGGIST, 42 Cannon Street, E.C." and the figure must be distinctly endorsed upon the envelope. Letters will then be forwarded to their proper destination. A price is counted as one word, as e.g., £1 10s. 6d.

DEPOSIT OF MONEY.—In order to ensure safety we offer the following system:—The purchaser of anything advertised in the Exchange Column may remit the amount to us, accompanied by a commission of 6d. if the amount is £3 or under; and 1s. if over that sum. We acknowledge receipt of deposit to both parties, and hold the money until we are satisfied that either the goods are returned to their original owner or the purchase is completed.

Postal orders and cheques sent as deposit must be made payable to Edward Halse, and crossed "Martin's Bank (Limited)."

FOR DISPOSAL.

Drugs and Chemicals.

Glycerin, pur. 1'260 d.d., 56-lb. tins, free on rail, for 25s. postal order; 2 tins, 48s. Fardon, Castle Street, Bristol.
Surplus goods; 2 lbs. potash iodid., 10s. 1b.; 3 lbs. bismuth subnit. 6s. 6d. 1b.; 5 lbs. opium Turc., 8s. 1b.; 40 lbs. good senra, $3\frac{1}{2}$ d. 1b.; 1,000 sandal-oil capsules, 25s. J. C., Lingdale, Skelton.

Literature.

Chemist and Druggist, complete with Diaries, 1890-91, 10s.; *Pharmaceutical Journal*, 1st 5 years, singly or lot, 8s. Macdonald, Chemist, Newington, Edinburgh.

"Year-Book of Pharmacy" and "Transactions of Brit. Pharm. Conf." from 1871 to 1890 inclusive, in splendid order, almost unused; what offers? "Medicus," c/o Barron, Harveys & Co., Giltspur Street.

Educational.

Wills' book dried medicinal specimens, 2s. 6d.; Wills' "Minor Postal Lectures" (copied), 5s. 6d. "Associate," 34 Heygate Street, Newington.

Galloway's "First Steps in Chemistry," 3s.; Bentley's "Manual of Botany," 2nd edition, 5s., 4th edition, 8s. 6d.; Attfield's "Chemistry," 4th edition, 3s., 6th edition, 5s., 9th edition, 6s., 11th edition, 8s. 6d.; Pereira's "Selecta e Prescriptis," 2s. 6d.; Fiesse and Lubin's "Art of Perfumery," 6s.; Gould's "Aerated Waters," 3s. 6d.; Wills' "Illustrated Materia Medica," 5s. 6d.; Wills' "Elementary Materia Medica," 2s. 6d.; Wills' "Elements of Pharmacy," 4th edit., 3s., 6th edition, 3s. 6d.; Wills' "Problems in Chemical Physics," 1s. 6d.; "Cue of Dispensing," 2s. 6d.; Bohn's "Cue of Translation," 2s. 6d. "Chemist," 7 Strand, Southsea.

Shop Fittings.

1 gross syphons and cases. Thomas & Son, Rochdale.

For sale cheap, 5 glass cases, 32x26x5, 38x26x16, 46x48x6, 69x8x7, 45x8x7. Apply, Parker, Chemist, York.

Dispensing-scales, 1 ox. "Avery," 11 in., verified, good order, 12s. 6d. Macdonald, Chemist, Newington, Edinburgh.

Mahogany-fronted drawers, sunk knobs, 14 ft. long, 14 in. deep, 10 in. back to front, about 45 drawers, labelled, good condition; cheap. Bordess, Driffield.

Sixteen 10-gallon oil-cisterns for shop, on zinc stand, with measures and drippers; what offers? cost 12l. last year. 19 Moseley Road, Birmingham.

Counter-case, bent plate-glass, 8 ft. long, as Maw's fig. 5; good as new; price 6l. 15s.; bent plate-glass case, with upright case at back, similar to Maw's fig. A 4, old list, 4 ft. long, 20 in. wide; height to top of carved scroll, 44 in.; price 6l. A. Lowe, Chemist, Norwich.

Shop-fittings, second-hand, comprising range of drawers 12 ft. long, with lockers and shelves complete, price 14l.; counter with glass front, solid mahogany, 10l.; dispensing-screen, mirror centre, 6l. 10s.; wall and counter-cases, &c. Philip Josephs, 54 Old Street, Goswell Road, London, E.C.

Second-hand mahogany-top counter, plate-glass cases in front, 7 ft. long, equal to new, 6l.; dispensing-screen for same, marble slab and mirror centre, 7l.; wall-fitting, with 100 mahogany-front drawers, 10l.; several wall-cases, carboys, and ointment-jars; set of 3 glass shelves, shaped and polished edges, 50s.; and 300 (assorted size) shop-rounds, gold-labelled, superior. 9s. per doz. Natali, 40 Gray's Inn Road, Holborn, London, W.C.

Miscellaneous.

Wanted, offers for iron mortar and pestle, 1 gallon capacity. J. Turner, Hipperholme, Halifax.

Platinum evaporating-dish, 3 in. diameter, over 3 fluid ounces capacity; what offers? "Medicus," c/o Barron, Harveys & Co., Giltspur Street.

A waterproof mattress, 36 in. x 48 in., new in June and only used 4 nights, cost 47. 19s. will sell for 4l. cash. W. Mann, Chemist, Clacton-on-Sea.

Surplus stock, good condition: 1 gross Barrow Evans' hair-restorer, 7s. 3d. doz. 84s. gross; Franz Josef water, 10s. doz.; Caffyn's Carnis Jelly, 20s. doz.; Malto-Carnis, 20s. doz.; Liq. Carnis, 18s. doz. and 30s. doz.; iron mixer-hand or power capacity, 1 cwt., 5l. 5s.; 1-pint fine oak varnish, 4s. doz.; 1-pint, 7s. 6d. doz. Adams, Chemist, Mansfield.

WANTED.

Suppository-mould, 15-grain, 2, 4, or 6 doz; good order. Dick, Charing Cross, Glasgow.

Six-foot dispensing-screen, in perfect condition. Full particulars to Agar Bros., Mansfield.

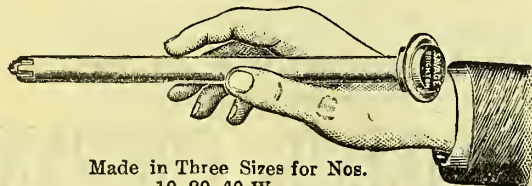
Counter-cases and drawers. 145/8, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

The last edition of Attfield's "Chemistry," 145/2, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

Allan's anti-fat; Nuda Veritas; Leathart's 2s. 6d., second colour. 143/6, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

The Chemist and Druggist for March 21, April 18, April 25, May 30, October 31, December 28, 1891: 2s. will be paid for the above delivered at 42 Cannon Street, post free, but offers must be made first by postcard, as the publisher can only take 5 sets.

SAVAGE'S SEALING-WAX HOLDER (PATENT APPLIED FOR).



Made in Three Sizes for Nos.
10, 20, 40 Wax.

Post free. 1/6 each.

This simple contrivance effects a great saving in Sealing Wax. All pieces, however small, can be used in it. A SEAL may be Engraved on the Cap (if required), cost according to design.

TO BE OBTAINED OF ALL SUNDRY AND PATENT MEDICINE HOUSES, AND OF
SAVAGE & CO., Pharmaceutical Chemists, BRIGHTON.



HARROLINE PILLS.

The Great Harrogate Tonic.

An unfailing Cure for Poverty of Blood, Anæmia, Chlorosis, and every form of Debility arising therefrom.

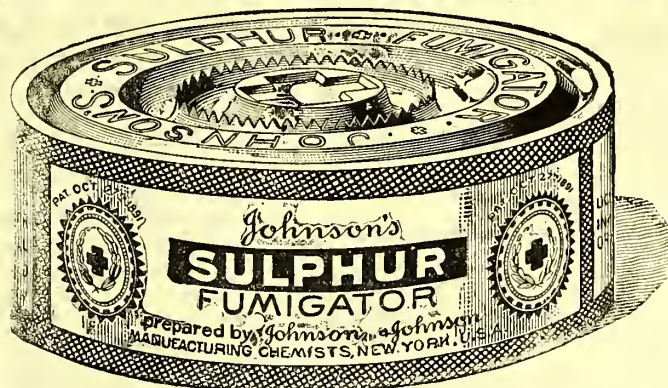
1s. 1½d. and 2s. 9d.

WHOLESALE FROM THE
HARROLINE PILL CO.
HARROGATE.

FULL PARTICULARS & TERMS ON APPLICATION.

JOHNSON'S SULPHUR FUMIGATOR

Patent No. 18,434
of 1891.



Patent No. 18,434
of 1891.

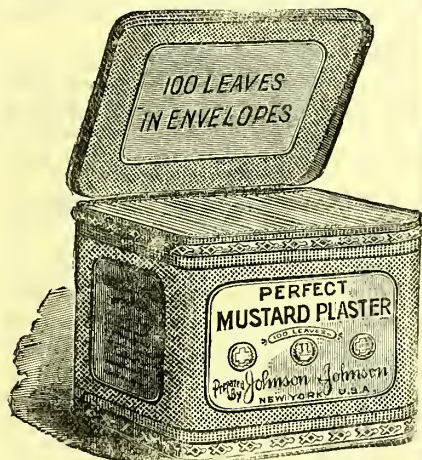
FOR FUMIGATING INFECTED ROOMS AFTER

CHOLERA.

Diphtheria, Typhoid Fever, Smallpox, Scarlet Fever, and other Contagious Diseases.

Destroys noxious vapours from sewers, &c. By the use of these Fumigators a safe and convenient mode of burning sulphur indoors is provided. One Fumigator will burn two hours, and is sufficient for an ordinary sized room.

JOHNSON'S FUMIGATOR is put up in a specially prepared FIREPROOF BOX, and will not burn nor become red hot like tin or other metal packages. Packed in neat Show Boxes with folding covers. A showy Counter Article. Retail price, 1/.



100 leaves in tin box, price 5s.

**IF YOU TRY THEM
YOU WILL BUY THEM!**

A Test and Comparison will show that the Mustard Plasters prepared by **JOHNSON & JOHNSON** are of greater strength and generally superior to others. They do not decompose nor change with age. They are packed in very handsome containers, in packages to retail at from 1d. to 1/6 each.

THEY ARE THE MOST PROFITABLE

To all concerned in Mustard Plasters because they are the best made.

TRADE PRICE LIST OF JOHNSON & JOHNSON'S IMPROVED MUSTARD PLASTERS

	On Paper	On Cloth	Retail price
3 leaves in round tin box, per dozen	2/9	3/-	/6 each
6 " " " " " " "	5/-	5/6	1/- "
10 " flat " " " "	7/-	8/6	1/6 "
100 " one in envelope, in tin box, per box	5/-	6/-	7/11 "
Yard rolls, 6 in. wide, per dozen	7/-	8/6	1/8 "
Half-yard rolls, 6 in. wide, per dozen	5/6	6/-	1/- "

Sample Mustard Leaf mailed to any chemist's address, without charge, on application: or on receipt of *£d.* in stamps, 1 box 10 leaves paper (see cut), and 1 box 3 leaves cloth, retail for 2/.



10 leaves in flat tin box, at 7/- per dozen boxes.

In ordering from the Wholesale Trade specify **JOHNSON & JOHNSON.**

TRADE LISTS ON APPLICATION TO

JOHNSON & JOHNSON, LTD., 1 & 2 AUSTRALIAN AVENUE, E.C.

THE LIVERPOOL SCHOOL OF PHARMACY, 24 NEWINGTON, LIVERPOOL.

PRINCIPAL—

Mr. J. S. WARD, Ph.Ch., F.C.S., &c.

HONOURS.

1892.—Mr. G. BAXENDALE won the Pharmaceutical Society's Bronze Medal.

Mr. BAXENDALE passed both the Minor and the Major Examinations from this School at the first attempt.

1891.—Mr. H. A. D. JOWETT won a Bell Scholarship, taking first place, and this year Mr. JOWETT has taken the Pereira Medal, and been awarded the Redwood Scholarship under the altered regulations.

1889.—Mr. E. B. SHERLOCK won the Redwood Scholarship, and the following year took the Pereira Medal.

1887.—Mr. W. A. SALTER won a Bell Scholarship, and became Pereira Medalist the next year.

1884.—Mr. J. E. SAUL (a member of the London Board of Examiners) passed the Minor Examination from here, and in 1885 won the Pereira Medal.

It is thus seen that four of the last eight Pereira Medalists received their early training at the Liverpool School of Pharmacy, and Mr. Baxendale has achieved a rare success in taking one of the Council prizes from "the Square" men.

The Session began on Monday, September 5, 1892.

A copy of the New Syllabus, illustrated and containing full particulars of the Classes, Time-tables, and Fees, with Pass Lists, will be sent post-free on application to the Principal.

NOW READY, SECOND EDITION, CROWN 8vo, PRICE 5s.

A PRACTICAL MANUAL OF

VENEREAL & GENERATIVE DISEASES:

Including SPERMATORRHOEA, PROSTATORRHOEA, IMPOTENCE, and STERILITY in Both Sexes.

By M. K. HARGREAVES, M.D.

Assistant Physician to St. Joan's Hospital for Diseases of the Skin.

LONDON: R. KIMPTON, 128 WARDOUR STREET, LONDON, W.O.

JUST PUBLISHED. 200 pp., Crown 8vo. 3s. 6d.

INDIGESTION

A Manual of the Diagnosis and Modern Treatment of the different varieties of Dyspepsia.

By GEO. HERSCHELL, M.D., LOND.

"Any work of this character must stand comparison with a number of able monographs either in English, French, or German. We think Dr. Herschell's book will compare favourably with any of these."—*Therapeutic Gazette*, Jan., 1892.

London: BAILLIÈRE TINDALL & COX.

CHEMICAL AND SCIENTIFIC APPARATUS.

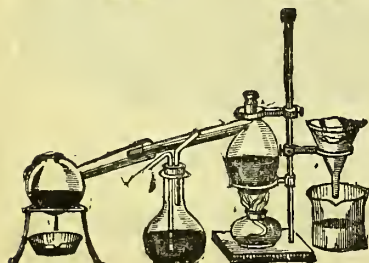
J. ORME & CO.

(Late M. JACKSON & CO.),

Manufacturers and Importers of every description
of Apparatus for Lecturers or Laboratory use.By Appointment to H.M. Hon. Board of Inland Revenue, Science and
Art Department, Royal School of Mines, Trinity House,
Pharmaceutical Society, &c.

ILLUSTRATED PRICE LISTS ON APPLICATION.

65 BARBICAN, LONDON, E.C.



"CONCILIO ET LABORE."

THE MANCHESTER COLLEGE OF PHARMACY.

225a & 227a OXFORD STREET, MANCHESTER.

Established 1877. Manchester 1882.

Directors { MR. W. SPENCER TURNER,
MR. CHARLES TURNER, F.C.S.,
Pharmaceutical Chemists.

The present Session began on August 29, so that intending students are requested to join the classes as soon as possible.

The new Copyright Prospectus is now being distributed and will be sent free to any address on application.

NORTHERN SCHOOL OF PHARMACY, 100 Burlington St., MANCHESTER.

PRINCIPAL—MR. GEORGE CLAYTON.

At the recent July Examination EIGHTEEN Gentlemen passed from the Northern School.

During the past twelve months (July, 1891, until July, 1892) SEVENTY-THREE Gentlemen have qualified from the "Northern," the percentage of passes being nearly 80 per cent.

The present Course commenced on Wednesday, August 31st. The Classes for advanced Minor and Major are full until October. There are a few vacancies in the Full Course which will work for the January Examination, and entries are now being made for the next Course, commencing in October.

Prospectus, with full particulars, posted on application to the Principal.

THE "ECONOMIC SERIES"

Of Twelve Botanical Slides, illustrating the Arrangement of the Elementary Tissues.

Specially arranged for the use of Students in Botany and Materia Medica, and designed for instruction and reference. Each Slide is marked with its characteristic feature, so that the Student may know what to look for in his histological practice.

10s. 6d. the Set in Case complete. Free by Post.

G. T. W. NEWSHOLME, Sheffield.

LONDON HOMŒOPATHIC HOSPITAL AND MEDICAL SCHOOL, GREAT ORMOND STREET, BLOOMSBURY W.O.

President—THE LORD EMBURY.

Contains 90 Beds, and being entirely supported by Voluntary Contributions, Donations and Annual Subscriptions are earnestly solicited. The Hospital is always open to the inspection of visitors, and Clinical Instruction is given in the Wards and Out-patient Department to Medical Students and Practitioners. It possesses a valuable Library of Homœopathic Publications, which Medical Men are invited to study. They are also invited to visit the Dispensary. The In-patients number over 700 annually; the Out-patients nearly 9,000 annually. The number of Patients treated since the inauguration in 1849 exceeds 215,000. It has a staff of Nurses for Ward Nursing and Nursing Invalids at their residence.

G. A. CROSS, Secretary-Superintendent.



**STRENGTH,
RAPIDITY,
AND
ACCURACY.**

**HICKS'S
LATEST PATENT**

The
Superintendent
of the Royal Kew
Observatory says:—

"Their manufacture is a piece of undoubtedly high-class glass-blowing, and I also think that the removal of the contraction of the glass stem, usually placed at about half-an-inch from the bulb, will tend greatly toward extending the average life of a thermometer by increasing its strength, independently of the fact that, with the diminished bulb, much less time is required now to register a patient's temperature, and so you will be conferring a very large benefit on the medical profession by its introduction to the world."

EVERY THERMOMETER OF THIS MAKE IS GUARANTEED TO REGISTER THE TEMPERATURE IN LESS THAN TWO MINUTES.
PRICE LIST ON APPLICATION.

SOLE PATENTEE AND MANUFACTURER—

JAMES J. HICKS, 8, 9, 10 Hatton Garden, LONDON, E.C.

**THE
"NON PLUS ULTRA"**

**CLINICAL
THERMOMETER.**

NOW READY.

And can be obtained at once
of all OPTICIANS and
LEADING SURGI-
CAL HOUSES.

See Press
Opinions.

**SILVERLOCK'S
POSTAL ORDER
RECORD BOOK.**
WITH PRINTED HEADINGS.
Size 8 x 5, bound in cloth.
Price 1/6, Post free.

**SAMPLES
Free by Post.**

**SAMPLES
FREE BY POST.**

**SILVERLOCK'S
CHEMISTS' SLIP LABELS**
From 1/ per 1000; a reduction on large quantities.
CHEMISTS' COUNTER BILLS
Good Quality, 7½ x 5 .. 10,000, 15/ | Second Quality, 7½ x 5 .. 10,000, 12/6
" 9 x 5½ .. 10,000, 22/6 | " 9 x 5½ .. 10,000, 18/
CHEMISTS' PILL LABELS
From 1/3 per 1000; a reduction on large quantities.

**COPPER-PLATES FOR SLIP AND DISPENSING LABELS
ENGRAVED FREE OF CHARGE.**

Labels of every description, Price Lists,
Illustrated Trade Catalogues, Prospectuses,
Pamphlets, Show Cards, &c.

H. SILVERLOCK,
Medical Label & General Printer,
92, BLACKFRIARS ROAD, LONDON, S.E.

**THE
CLINICAL CLERKS'
GUIDE TO URINE TESTING**
On 3-fold linen-lined card,
9 in. by 5 in.
Price 7d., Post free.

**SAMPLES
Free by Post.**

**THE
WHOLESALE
AND RETAIL
DRUGGISTS' PRICE BOOK**
BY D. ELLIOTT.
NEW EDITION, 1891. Revised according to
the latest Edition of the British Phar-
macopoeia 1890. Pocket size, bound
in leather, price 3/6.
This Edition can be used
as a Telegraphic Code

**JOHNSON'S
COMPENDIUM
FORM,**
For Rating Trade Receipts and Expenses.
(Specially adapted for Chemists.)
Eighth Edition, Revised, price 8/6.
Or for three Years with a Three
Years' Balance Sheet,
bound in one Volume,
price 10/6.

DARTON'S IMPROVED CLINICAL THERMOMETER.**REDUCED
PRICES.**

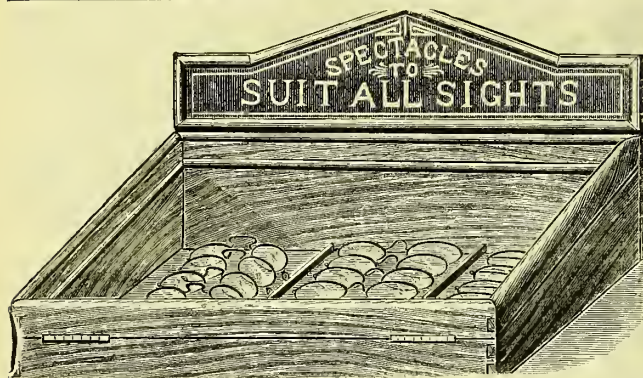
Fig. 1.

Fig. 2.

Fig. 3.

Hospital Pattern, in German Silver Cases	...	...	...	...	...	...	...	...	21/	per dozen.
Standard do., Fig. 3	...	...	...	...	...	...	...	...	27/	"
Lens Magnifying Front, "Hospital Pattern, Fig. 1, in German Silver Cases or Vulcanite	...	...	...	...	...	...	...	...	36/	"
Do., rapid action, by which readings can be taken in as short a time as 30 seconds, Fig. 2	...	...	...	...	...	...	...	...	48/	"
Kew Certificates	...	...	...	...	...	...	...	...	12/	doz. extra.

We beg to caution our clients against buying spurious imitations of our well-known goods.

**DARTON'S
SHOW CASES OF SPECTACLES.**

Chemists commencing the Spectacle business will find these Show Cases arranged with an assortment of Spectacles and Folders of all sights, to meet the requirements of purchasers. The quality and quantity may be varied to suit any class of trade at customer's wish. Case is of Solid Polished Mahogany, well made and finished, to stand any climate. A large Coloured Show Card is sent with each case, and instructions for testing sights, with table of Nos., and together with Sight Tester, £2 2s.; do., with assortment of Folders and Test Types, £3 3s.; Large-sized Case, with more complete assortment, £6 6s.; do., with assortment of Pebble Spectacles, £10 10s.; Large-sized do., £21.

The following Trade Lists now ready: "Spectacles and General Optics," "Meteorological Instruments," "Electric Bells, Medical Batteries, &c.," mailed Free to any part of the World.

F. DARTON & CO., (Makers to H.M. Government) Clerkenwell Optical Works, 142 ST. JOHN STREET, LONDON, E.C.

**FALLOWFIELD'S
PHOTOGRAPHIC ANNUAL, 1892-3,**

1/- 592 PAGES. 806 ILLUSTRATIONS. 1/-

(FREE TO CHEMISTS ONLY).

SPECIAL DISCOUNTS TO CHEMISTS.

**"FACILE" HAND CAMERA,**

£3 13s. 6d. and £5 5s.

"FALLOWFIELD" HAND CAMERA

£7 17s. 6d.

PERFECTION of ELEGANCE and WORKMANSHIP.

Fullest Particulars in 24-page Illustrated Pamphlet (Post Free).

**JONATHAN FALLOWFIELD,**

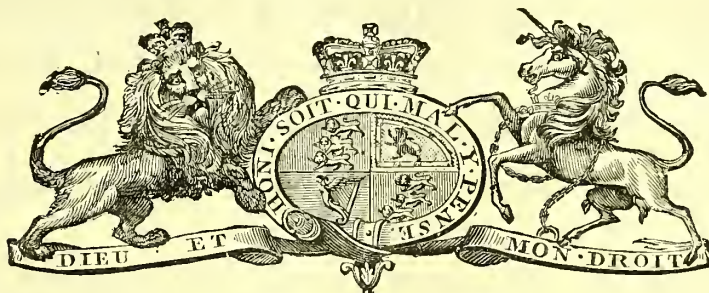
CENTRAL PHOTOGRAPHIC STORES,

146 CHARING CROSS RD., LONDON.

IDRIS TABLE WATERS

The PUREST and the BEST.

Purveyors
of
Table Waters
by
Royal Warrant



of Appointment
to
Her Majesty
the
Queen.

- IDRIS SODA WATER.** Brilliant, Pungent, and Sparkling.
IDRIS POTASH WATER. Prepared according to the British Pharmacopoeia.
IDRIS SELTZER WATER. Pure and Delicious Table Water.
IDRIS LITHIA WATER. Of Guaranteed Strength.
IDRIS GINGER BEER. Aerated or Brewed.
IDRIS GINGER ALE. A remarkably grateful Aromatic Beverage, particularly suitable for meals, improving the appetite and aiding the digestion.
IDRIS LEMONADE. Pure, fruity flavour of ripe lemons.
IDRIS ORANGE CHAMPAGNE. Made from the fruit.
IDRIS HOP ALE. Non-Alcoholic.
IDRIS QUININE TONIC WATER. A refreshing tonic.
IDRIS OLYMPIA WATER. A Carbonated Distilled Water.

[2]

IDRIS LIME JUICE CORDIAL.

IDRIS PURE LIME JUICE.

IDRIS LIMETTA.

IDRIS PALATABLE LIME JUICE.

IDRIS FRUIT CORDIALS. (20 varieties.)

IDRIS TABLE WATERS IN SYPHONS AND BOTTLES.

IDRIS & COMPANY,

ASCHAM STREET, KENTISH TOWN, N.W.

TO EXPORTERS OF MINERAL WATERS.

JEWSBURY & BROWN, MANCHESTER,
specially prepare and pack their unrivalled MINERAL WATERS and
AERATED BEVERAGES for Export, and will have pleasure in quoting
prices and terms delivered free alongside ship at any British port.

Wherever these Waters have been introduced the superiority of quality,
style, and freedom from Leakage and Breakage have secured for the Brand
preference with the consumer, and given every satisfaction to the shippers.

60 AERATED WATER MANUFACTURERS

HAY'S

SOLUBLE ESSENCES

ARE GUARANTEED TO BE THE FINEST IN THE MARKET

GINGER. HOP. LEMON &c &c

W. HAY, MANUFACTURING CHEMIST

MUL

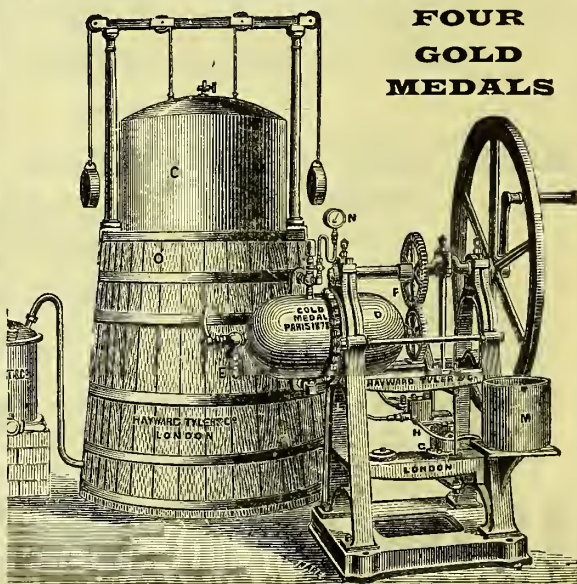
IN ORDERING SPECIFY HAY'S MANUFACTURE

HAYWARD TYLER & CO.

AWARDED FOR

AERATED WATER MACHINERY

FOUR
GOLD
MEDALS



Telegrams—"Tylerox."

Telephone No. 192.

[2]

90, 92 WHITECROSS STREET, E.C.



PURE ESSENTIAL OILS



WE desire to draw the especial attention of the trade to the numerous additions of Essential Oils of exceptional quality recently made in our Price List.

For some time past we have endeavoured to produce qualities of Essential Oils greatly superior in character to anything previously placed upon the market, in order to supply the natural want of those consumers whose sole object is to obtain articles of exceptional fine quality irrespective of price. To obtain our desire we have thoroughly studied the methods of cultivation and production with the result that we are now offering Essential Oils excelling in all the necessary qualities—pungency, strength, and aroma. We append a List of the Oils above alluded to:—

Drawn at our Works at HACKNEY.

OIL ANISEED.

- " CARAWAY, from selected English Cultivated Seeds. (The quality usually sold as English drawn is from Dutch Seed.)
- " CARDAMOMS.
- " CEDAR WOOD.
- " CINNAMON, from the Finest Selected Bark.
- " CLOVES, AMBOYNA, from Amboyne Cloves.
- " COPAIBA, from Para Balsam.
- " CORIANDER, from selected English Cultivated Seed. (The quality usually sold as English drawn is from the German Seed.)
- " CUBEBS, from selected Cubebs freed from Stalks.

OIL GINGER, from finest Cochin Ginger.

- " HOPS, from Kentish Hops.
- " JUNIPER, from selected Berries.
- " NUTMEGS, from sound selected Nutmegs.
- " LAUREL LEAVES. We are the only drawers of this Oil.
- " PATCHOULI, from selected leaves only, freed from stems.
- " SANDAL WOOD, from specially selected Mysore Logs, of direct importation.
- " SASSAFRAS, from selected logs.
- " VERTIVERT (Cus Cus). We are the only drawers of this Oil.

Drawn at our Works at MITCHAM.

(From Plants cultivated in the neighbourhood.)

POTTER & MOORE, ESTABLISHED 1749.

OIL CAMOMILES.

- " LAVENDER.
- " PEPPERMINT, from White and Black Plants.

OIL SPEARMINT.

- " VERBENA.

Drawn at our Works at GRASSE.

OIL LAVENDER, from cultivated Plants and doubly rectified.

- " NEROLI.
- " PETIT GRAIN.

OIL ROSEMARY, from cultivated Plants.

- " THYME, from cultivated Plants.

Manufactured at our Works at SICILY.

OILS LEMON AND ORANGE, absolutely pure, and from selected Fruit.

OIL BERGAMOT, from sound and selected fruit, absolutely genuine, produced at our New Works, San Ferdinando, Calabria.

W. J. BUSH & CO., 18 ARTILLERY LANE, LONDON.

SYPHONS & SELTZOGENES

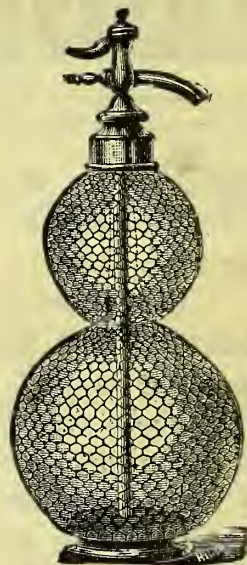


SODAWATER MACHINERY

AND APPLIANCES
BRATBY & HINCHLIFFE LTD
ANCOATS & 146 MINORIES
MANCHESTER & LONDON EC

81 ROBERTSON STREET, GLASGOW.

All our Seltzogenes are manufactured on the well-known "Fevre" System, and each one is thoroughly tested before leaving the works.



PRICES.

SYPHONS ... 1/6 1/8 and 1/10 each.

SELTZOGENES.

1	2	3	4	5	8 pint.
5/6	6/2	7/	8/	9/11	15/6 each.

Including two funnels and stopper for charging.

NATURAL MINERAL WATERS

Packing
Free.

INGRAM & ROYLE,

Packing
Free.

LONDON—52 Farringdon St., E.C.

LIVERPOOL—19 South John Street.

VICHY

SOLE IMPORTERS OF

(STATE SPRINGS)

VICHY

ÆSCULAP, CARLSBAD, CARLSBAD SALTS, LA-BOURBOULE, ROSBACH, VALS, &c., &c.

NAME.	Per Dozen.		Original Packages.				NAME.	Per Dozen.		Original Packages.			
	Bots.	½ Bots.	Bottles.	½ Bottles.				Bots.	½ Bots.	Bottles.	½ Bottles.		
Æsculap	15/	12/	25	30/	50	50/	Levico .. .. .	..	15/	..	..	..	..
Apollinaris	6/3	5/	50	25/	100	39/	Pullna	12/	8/	40	36/	40	25/
Bourboule (La)	11/	..	50	42/	..	..	Rosbad	6/	..	50	25/	..	..
Carlsbad	12/	..	50	46/	..	..	Rosbach	6/	5/	50	24/	100	36/
Condal .. .. .	..	14/	..	..	50	56/	Royat	9/	..	50	34/	..	..
Contrexeville	9/	..	50	35/	..	..	Rubinat	15/	9/	25	30/	50	36/
Flitwick	24/	15/	..	..	..	..	St. Galmier	6/	..	50	22/	..	..
Franz-Josef .. .. .	..	11/	..	..	50	42/	St. Marco	11/	..	50	42/	50	..
Friedrichshall	13/	10/	25	25/	50	40/	Selters	6/	4/6	50	24/	..	17/
Hnnyadi-Janos	15/	13/	25	30/	50	50/	Vals	8/6	..	50	33/	50	..
Johannis-Brunnen	6/	4/6	50	22/	100	35/	Vichy (State Springs)	8/6	7/6	50	33/	..	29/
Kronenquelle	10/	..	50	40/	..	..	"Celestins," "Grande-Grille," &c.	..	..	..	..	..	..

CARRIAGE PAID to any RAILWAY STATION in the UNITED KINGDOM.
DETAILED PRICE LIST AND PAMPHLET ON APPLICATION.

Telephone No. 7547.

Telephone No. 7547.

“CAMWAL”

TRADE MARK.

TOPS THE TRADE

ONLY PRIZE MEDAL,



LONDON, 1881.

RAISED BY THE
PERSISTENT ENERGY
AND GREAT CARE
OF CHEMISTS

Year	No. of Members	Dividend
1878	119	None
1879	350	None
1880	430	None
1881	540	None
1882	615	3½
1883	708	6

TELEGRAPHIC ADDRESSES:

Rubine, London.
Chemists, Starbeck, Harrogate.
Camwal, Bristol.

HIGHEST PRIZE MEDAL,



BRADFORD, 1882.

STRENGTHENED AND
SUPPORTED BY THE
APPROBATION OF THE
MEDICAL PROFESSION

Year	No. of Members	Dividend
1884	908	8
1885	1,193	6
1886	1,483	6
1887	1,612	7½
1888	1,892	6
1889	2,031	7½
1890	2,088	8½
1891	2163	10%

TELEGRAPHIC ADDRESSES:

Rubine, London.
Chemists, Starbeck, Harrogate.
Camwal, Bristol.

This Company manufactures the various descriptions of Mineral Waters of the highest class and of specified formula, and supplies **ONLY** Chemists and Hospitals.

PRICES.

		In Corked Bots.	In Syphons.			In Corked Bots.	In Syphons.
Carbonated Water	..	1/-	1/6	Lime Juice	..	1/-	2/6
Soda	..	1/-	1/6	Ginger Ale	..	1/-	2/6
Soda	B.P. 15	1/-	1/6	Ginger Beer, Glass	..	1/-	2/6
Potash	..	1/-	1/6	Lithia, B.P., 5 grains to Half-pint	..	1/6	2/6
Potash	B.P. 15	1/-	1/6	Iron and Quinine Water	..	1/6	..
Seltzer	..	1/-	1/6	Mineral Acid	..	1/6	..
Lemonade	..	1/-	2/6				

Syphons, 24s. per dozen.

Cases—3 dozen 3s. 6d.; 4 dozen 4s. 6d.; 6 dozen 5s. 6d. each.

Empties allowed for at same prices.

3d. per dozen charged extra for the delivery of Syphons in London.

SYRUPS.

In 26-oz. bottles, handsomely labelled and capsuled. Raspberry, Strawberry, Cherry, Red Currant, Black Currant, Pine Apple, &c., 8/- per dozen. Lime Fruit Cordial, 6/6 per dozen. Bottles charged 1/- per dozen, and allowed for on return.

A holder (Chemist) of £1 share is entitled to all the advantages of this Association.

SAMPLE CASE OF WATERS SENT FREE.

Handbills with Name and Prices supplied gratis to Shareholders.

The Chemists' Aerated and Mineral Waters Association, Limited,
LONDON, HARROGATE, & BRISTOL.

EIGHT PRIZE MEDALS AWARDED.

GOODALL'S HOUSEHOLD SPECIALITIES.

YORKSHIRE RELISH.

Most Delicious Sauce in the World. Bottles, 6d., 1s., & 2s. each.

GOODALL'S BAKING POWDER.

The Best in the World. 1d. Packets; 6d., 1s., 2s., and 5s. Tins.

GOODALL'S EGG POWDER.

One 6d. Tin is equal to 25 eggs. In 1d. Packets; 6d., 1s., and 5s. Tins.

GOODALL'S CUSTARD POWDER.

Delicious Custards without Eggs. In Boxes, 2d., 6d., & 1s. each.

GOODALL'S BLANCMANGE POWDER

Delicious Blancmange in a Few Minutes. Boxes, 6d. and 1s. each.

GOODALL'S QUININE WINE, B P.

Best Tonic yet Introduced. Bottles, 6d., 1s., and 2s. each.

GOODALL'S GINGER-BEER POWDER.

Makes the Best Ginger-Beer. Packets, 3d. and 6d.

GOODALL'S BRUNSWICK BLACK.

For Painting Stoves, Grates, Iron, Tin, &c. 6d. & 1s. Bottles.

GOODALL'S LAVENDER WATER.

A Rich and Lasting Perfume. Bottles, 1s., 2s., and 5s. each.

GOODALL'S PLATE POWDER.

For Polishing and Cleaning all Metals. Boxes, 6d., 1s., and 2s.

GOODALL'S JELLY SQUARES.

Make a Delicious and Nutritious Jelly. In ½-pint, 1-pint and Quart Boxes, 3d., 6d., and 1s. each.

PROPRIETORS—GOODALL, BACKHOUSE & CO., LEEDS.

PATENT MEDICINES

AND

DRUGGISTS' SUNDRIES.

Monthly Price List of Patent Medicines, Druggists' Sundries &c., will be sent post free on application to

GOODALL, BACKHOUSE & CO., LEEDS.

PARIS EXHIBITION, 1889.

PRIZE MEDAL AWARDED TO



"SALVO PETROLIA"

Absolutely Genuine Paraffinum Molle of the very Purest Form, and we claim that it is superior to Vaseline.

Manufactured by the Proprietors in Five distinct qualities—
WHITE, LEMON, YELLOW, GOLDEN, AND VETERINARY.
PACKED IN TINS, 1, 5, 10, 14, 28, 56, and 112 lbs. Also in 3-cwt. Casks.

"OLEUM DEELINÆ"

(REGISTERED).
UNIVERSALLY ADOPTED BY THE MEDICAL PROFESSION FOR
OPHTHALMIA, SCURVY, RINGWORM, ECZEMA,
AND ALL SKIN-DISEASES.

For External and Internal Irritation of every kind.

PACKED IN CASES—
One Doz. 1s. 6d. Bottles; One Doz. 2s. 6d. Bottles.
Pint Bottles, 4s. 6d. each, for Hospitals and Dispensing Chemists.

TESTIMONIALS MAY BE HAD UPON APPLICATION.

"Edible Salvo Petrolia"

For Public Speakers, Actors, and Singers.
1s. 6d. per Tube.

The above are Manufactured Solely by the Proprietors,

THE DEE OIL COMPANY, LIMITED.

Works—SALTNEY, CHESTER.
OFFICES—

LONDON—38 LEADENHALL ST., E.C.

Liverpool, Dublin, Manchester, Glasgow, Hull, Cardiff,
Bristol, Belfast, Barrow-in-Furness, Nottingham,
Paris, Hamburg, &c.



PASCALL'S GOLDEN MALTEX

PATENTED.

Contains 25 % of Allen & Hanburys' Extract of Malt.

A NOVEL CONFECTION.*Delicious Flavour. Brilliant & Attractive Appearance.***SELLS AT SIGHT.***Vide Dr. Tanner's Report, and The Chemist and Druggist, April 20th.*1/- Bottles, 9/- per dozen; 1-lb. Bottles, 18/- per dozen;
and in 2-lb. and 4-lb. Bottles, 1/4 per lb.

HANDBILLS POST FREE ON APPLICATION.

OF ALL WHOLESALE HOUSES, OR OF THE MANUFACTURER,

JAS. PASCALL, BLACKFRIARS ROAD, LONDON, S.E. [1]

NONE GENUINE WITHOUT THE

TOWER TEA

HIGHEST AWARD, PARIS, 1889.

*Analysis by the "LANCET," December 20th, 1890:—**"We have submitted to examination the Teas of the Great Tower Street Tea Company (Limited). They all yield liquors which are generous to the taste, and of full strength and vigour. The results of our analysis indicate the purity and genuineness of the samples."*

PRIZE MEDAL, PARIS, 1889.



REGISTERED TRADE MARK.

Where Vacancies exist, Agencies are appointed by

THE GREAT TOWER STREET TEA CO., LIMITED

5 JEWRY STREET, LONDON, E.C.

DESIRABLE AND PROFITABLE AGENCY FOR CHEMISTS.

SPRING BLOSSOM CEYLON TEA.

Packed in Circular Air-tight Canisters and in Lead Packets to sell retail at 1/10, 2/-, 2/4, and 2/10 per lb. Tasting Samples and Teas post free; or set of four Specimen 1/4-lb. Samples post free for 2/- in stamps. A full supply of printed advertising matter, in the form of Invoices and Handbills (printed with Customer's name and address), Price Cards, bold and effectively Coloured Posters, and most handsome Show Card, free of charge.

AGENTS APPOINTED WHERE NOT REPRESENTED.

CAVE, JOHNSON & CO., WHOLESALE TEA AND COFFEE DEALERS, 8 LIME ST., LONDON, E.C.
BANKERS—WILLIAMS, DEACON & CO.*N.B.—This tea being packed in Air-tight Packages is not liable to be deteriorated by the flavour of any other foreign substance.*

"MYRTLE GROVE" TOBACCO

In 1-oz., 2-oz., and 4-oz. Packets, and 1/4, 1/2, 1 lb. Tins only.**TADDY & CO., 45 Minories, LONDON**

ESTABLISHED 150 YEARS.

SNUFF, TOBACCO, AND SEGAR MANUFACTURERS.

Write for List of Specialities.

DENAAYER'S PEPTONOLIDS

AND EXTRACT OF
118 BISHOPSGATE ST.



MEAT COMPANY, LIM.,
WITHIN, LONDON, E.O.

TELEGRAPHIC ADDRESS

"DENAAYER LONDON."

DISCRIMINATE FOR YOUR CUSTOMERS!

between the fictitious nutritive value of such invalid foods as are mainly composed of Gelatine or the extractive matters of meat, or both, as many so-called peptones, meat essences, &c., are, and the true

STRENGTH OF MEAT,

which is not yielded by its GELATINE nor by its EXTRACTIVES, but by the ALBUMINOID matters it contains, and which, by Denaayer's process, are dissolved and converted by pepsine into a delightful and elegant preparation.

See THE LANCET, May 2nd; HOSPITAL GAZETTE, June 5th; CHEMIST AND DRUGGIST, April 16th; ANALYST, May 1st upon Mr. Denaayer's new method for the Analysis of Peptones, whereby the gelatine is capable of determination, whereas this body has hitherto been unavoidably included with peptone albumose by analysts.

Description will best be appreciated with the articles before you, therefore you are invited to send for a free sample of DENAAYER'S STERILIZED PEPTONE OF MEAT (2/- per bottle, ready for use).

DENAAYER'S LIQUID PEPTONATE OF IRON (1/6 per bottle).

PULVIS FERRI PEPTONATIS (Denaayer), 4/- per ounce.

PEPSINA PORCI (Denaayer), 3/- per bottle, one-third of an ounce.

DEPOT AGENCIES—

FOR SCOTLAND—EDINBURGH: Messrs. Duncan, Flockhart & Co.; GLASGOW: Old Apothecaries' Co., Lim.
FOR IRELAND—DUBLIN: Messrs. Hamilton, Long & Co., Lim.; BELFAST: Messrs. Grattan & Co. Lim.

GEO. MASON & CO.'S ESSENCE OF BEEF.

HOSPITAL FOR CONSUMPTION, BROMPTON.
Order No. 1080.

"Please supply 120 tins Mason's Essence of Beef as before."



ST. MARY'S HOSPITAL, PADDINGTON.
Order No. 602.
"Please send at once 2 tins Mason's Essence of Beef."

TRADE MARK.

"O.K." BOUILLON.

The "O.K." Bouillon is the best and cheapest Beef Tea ever put before the public. It is made in England from British Beef. It can be sold as low as 6d. per tin.

CONCENTRATED BEEF TEA, MEAT LOZENGES.

MASON'S MALTED FOOD FOR INFANTS.

PRICE LISTS POST FREE.

417 & 419 Kings Road, Chelsea, London, S.W.

24

BY SPECIAL
H.R.H. THE DUKE OF
ROYAL



APPOINTMENT TO
CONNAUGHT AND THE
FAMILY.

BOURNE WATERS.

THE PUREST IN ENGLAND.

R. M. MILLS & CO., BOURNE, LINCOLNSHIRE,

MANUFACTURERS OF

SODA, POTASH, LITHIA, AND SELTZER WATERS
LEMONADE, AND AROMATIC GINGER ALE.

4-dozen and 6-dozen Cases Carriage Paid.
Special attention is invited to our manufacture of

LITHIA WATER.

Each Bottle contains an average dose of Carbonate of Lithia—
the recognised Specific for Gout.

THE LATEST SPECIALITY—the Celebrated Artesian Bourne Water in
Pints and Quarts for Table Use.

Prices and Pamphlet on application. Agents appointed.

MESSRS. HARDY & CO., Chemists, 23 FENCHURCH STREET.
D. WHEATLEY, 16a NORTH AUDLEY STREET.



SACCHARUM LACTIS (SYSTEM LANGEN).

Highly recommended by authorities. The
only make of perfect purity in all respects.

AGENTS— [2]

BURROUGHS BROS., 66 Basinghall St., LONDON, E.C.

Cash Price—20s. for 12½ Gallons.

CASKS FREE.

School of Cookery, Crystal Palace, S.E.

January, 1883.

Mr. PETER TYRER,

Sir,—I have been using the "Borough" Ketchup, and am very pleased with it. Its flavour is excellent, both for all kinds of Savoury dishes and Soups; and I most certainly should advise every cook and housekeeper to use it, FOR I HAVE NEVER YET MET ITS EQUAL.

[2] MARIAN SMITHARD,

Lectress on Cookery.

IT IS A FACT THAT THOSE WHO BUY FOR CASH

DO NOT THROW MONEY AWAY
BUT WRITE
FOR A
FREE SAMPLE OF
SENT FREE
TO ANY ADDRESS

Tyrer's
"BOROUGH"
Ketchup

SILVER MEDAL
LONDON.

MANUFACTORY—70 Long Lane, Borough, LONDON, S.E.

CHIEF SCOTCH AGENCY—West Nile St., GLASGOW.

PETER TYRER'S SAUCES

WORCESTER, READING, HARVIE, YORKSHIRE, AND "BOROUGH" KETCHUP,
 SILVER MEDAL.

			Per gross.	Extra Quality.			Per gross.	Extra Quality.
1d. Sample Bottles, dozen parcels	..	..	5/3	6/3	½ Bottles, flat or round, reputed ½ pints	..	16/-	26/-
" " ½-gross boxes	..	..	5/9	6/9	" " " pints	..	26/-	38/-
1d. Giant " dozen parcels	..	..	6/6	8/6	1 Pint Imperial, round stoppered bottles	..	52/-	62/-
" " ½-gross boxes	..	..	7/-	9/-	12½-Gallon Casks (casks free) ..	..	each 20/-	32/-

ROYAL CAFE SAUCE, a Rich Fruity & Exquisite Flavour.

Square Glass Stoppered Bottles, containing nearly ½ pint Imperial, 42/- per gross.

Sample Bottles at 7/- per Gross

VINACOCA

Embracing the Therapeutic Properties of the COCA Plant, blended with the best Madeira.

COCA FOR TROUBLESOME THROATS.

VINACOCA is a direct stimulant of the most active kind, supporting life in a manner almost miraculous, without disturbance of the vital functions. For the voice, a wineglassful before any ordeal is sufficient. Its effect upon the vocal cords is surprising, and of great value to Public Speakers, Professional and other Singers, and Lecturers.

The VINACOCA is carefully prepared from the best Coca Leaf only. (No addition of Cocaine.)

ONLY ONE WINE (CHOICE MADEIRA)
 ONE QUALITY (A 1)
 ONE PRICE } **THE BEST & CHEAPEST ON THE MARKET.**

Sold in Bottles at 3s. 6d. each, or 40s. per dozen, Retail. Usual Trade Discount.

Pamphlets for distribution, carriage paid.

COCA is prepared in various forms: COCA LOZENGES, COCA TABLETS, COCA ELIXIR, COCA TEA, COCA CHOCOLATE, STAMIN (Coca and Beef Extract), COCA TOBACCO, &c.

MENTHOLIN (PATRONISED BY ROYALTY) PREVENTS INFLUENZA.

Is a Perfect Remedy for Coriza or Cold in the Head. Highest opinions from Public and Press.

Retail Price, 1s. 1½d. per Box.

FULL PARTICULARS FROM

THE FRENCH HYGIENIC SOCIETY,
 6 CONDUIT STREET, REGENT STREET, LONDON, W.

DRUGGISTS' CONFECTIONERY.

MESSRS.

ROBERT GIBSON & SONS,

CARLTON WORKS, MANCHESTER,

And No. 1 GLASSHOUSE YARD, ALDERSGATE ST., LONDON,

Have now completed their **EXTENSIVE ALTERATIONS**, New Machinery and the most modern Appliances making their works the most complete of the kind in the Kingdom.

GIBSON'S SUPERIOR BOILED SUGARS

Have gained a high reputation everywhere. **FOR EXPORT TRADE.** They are put up in 1-lb., 2-lb., and 5-lb. Bottles. Packed in Casks or in 1-doz. Cases as required, and delivered F.O.B. at any Port in England. These Sweets are absolutely pure. We specially recommend

Lime Fruit Tablets, Everton Toffy, Mixed Fruit Drops, Cough Drops, Raspberry Drops, Lemon Tablets.

COMPRESSED PELLETS.

ALL KINDS IN ANY QUANTITIES.

CHLORATE OF POTASH PELLETS

IN 1-OWT. ORIGINAL BARRELS. BARRELS FREE.

HIGH-CLASS LOZENGES

OF EVERY DESCRIPTION.

**THROAT HOSPITAL LOZENGES, COUGH LOZENGES,
VOICE LOZENGES, TOP-NOTE PRODUCERS, &c., &c.**

Indents from abroad, marked "GIBSON," may be sent to any Wholesale Drug or Shipping House in the Kingdom. [2]

Price Lists sent on application to

ROBERT GIBSON & SONS, Carlton Works, MANCHESTER.

Telephone Number, 1852.

Telegraphic Address—CHEMIOUS LONDON.

ADVERTISERS' AND BUYERS' REFERENCE LIST AND INDEX TO ADVERTISEMENTS.

INDEX TO ADVERTISEMENTS APPEARING IN THIS ISSUE.

NOTE.—The Folios shown in this Index are those at the FOOT of the Page, and not at the Top. This arrangement is necessary in order to meet the requirements of the Post Office.

Foot of Page		Foot of Page		Foot of Page		Foot of Page	
Allen & Hanburys	Front Cover	Day, Son & Hewitt	53	Kay Bros. (Lim.)	42	Raybould, Flesher, & Co.	55
Apollinaris Co.	Outside Cover	Dee Oil Co. (Lim.)	22			Robbins & Co.	41
Armour & Co.	30	Denaeyer's Peptone Co.	24	Leete, Edwards & Co.	56		
Balm of Bethesda Co.	54	Downie B. I. P. Co.	44	Leo & Co.	39	Salomon & Co. (Lim.)	54
Barber, G., & Co.	57	Drysdale & Co.	44	Levermore & Co.	54	Sanitas, The Co. (Lim.)	39
Barclay & Sons (Lim.)	38	Duncan, Flockhart & Co.	38	Lewig, M.	55	Savage, W. W.	13
Barrett, R. H.	50	Dussek Bros. & Co.	10	Liebig Co.	29	Seabury & Johnson	43
Battley & Watts	55			Lincoln Drug Co.	43	Sequan (Lim.)	43
Beecham, T.	46	Maed's Pills	54	Lindsey & Sons	48	Shipkoff & Co.	45
Berdoe & Co.	Coloured Supplement	Edman, Sons & Co.	Text 398	Liverpool School	14	Shirley, A.	47
Berger, F.	41	Exchange Column	192	Lloyd, T. Howard, & Co.	58	Silicated Carbon Co.	Text 398
Berkley, J.	54			Lofthouse & Saitner	40	Silverlock, H.	15
Blondeau & Co.	35	Fallowfield, J.	16	London and Lancashire Insu-		Smith & Sons	40
Boehm, F.	40	Fennings, Alfred	Outside Cover	rance Co.	Text 398	Smith, S., & Co.	52
Boehringer & Sohne	40	Fink, F., & Co.	54	London Homoeopathic Hospi-		Smith, T. & H., & Co.	41
Boord & Son	53	Fletcher, Fletcher & Stevenson	398	pital and Medical School	14	Solport Bros.	31
Boot's Pure Drug Co. (Lim.)	42		Text 398	Lynch & Co.	Cover	Sozio & Andreoli	45
Boulton, J., & Co. (Lim.)	40	French Hygienic Co.	25			Spurin, R. C.	49
Bratby & Hincliffe (Lim.)	25	Fuerst Bros.	21	Manchester School	14	Stevens, P. A.	54
Bremts, E., & Co.	49			Mason, G., & Co. (Lim.)	24	Stevenson & Howell	5
Brett, F. J.	Coloured Supplement	Gardner, W.	56	Maw, S., Son & Thompson	Cover	Sutton, W., & Co.	42
Brooks, T.	54	Gent & Co.	Text 398	May & Baker	Cover		
Burn, H.	54	Gibson, R., & Sons	26	May, Roberts & Co.	5	Taddy & Co.	23
Burroughs Bros.	24	Giles, Schocht & Co.	39	Millar, A., & Co.	52	Tasmanian Eucalyptus Co.	38
Burroughs, James	53	Goodall, Backhouse & Co.	22	Millis & Co.	24	Townsend, J.	56
Burroughs, Wellcome & Co.	33, 34	Graham, W., & Co.	54	Moenich, O.	52	Trade Mark Agency	55
	Front Cover	Great Tower St. Tea Co.	22	Morison's Pills	54	Treble, G., & Co.	57
Bush, A. P., & Co.	54	Green, R. W., & Co.	36	Muhlens, F.	46	Tyler, Hayward, & Co.	18
Bush, W. J., & Co.	19	Guy's Tonic Co.	43			Tyrer, P.	25
Businesses for Disposal.	Col. Supp.			National Cash Till Co.	57	Tyrer, Thomas, & Co.	8
		Hargreaves, Dr.	14	Newbery, F., & Son	43		
Cadbury Bros.	Cover	Harker, Stagg & Morgan	41	Newshome, G. T. W.	14	Vacoline Association	48
Calvert, F. C., & Co.	44	Harroline Pill Co.	12	Northern School	14	Voucher Check Till Co.	57
Cave, Johnson & Co.	23	Hay, W.	18				
Chassaling & Co.	Text 398	Hearn, E. A., & Co.	40	Oakey, J., & Son	55	Warrick Bros.	Text 398
Chemists' Association (Lim.)	6, 7	Herschell, G., M.D.	14	Oppenheimer, Son & Co.	31	Watson & Wates	55
Chemists' Mineral Water Asso-		Hickiss, J.	15	Orme, J. A.	14	"W" Brand Bottles	50
ciation	21	Hicks, J. J.	35	Orridge & Co.	Coloured Supplement	Werner & Pfeiderer	56
Chesebrough Manufacturing		Horn & Son	54			Wood, V.	48
Co.	34			Pascoli, J.	23	Woodward, W.	10
Christy, T., & Co.	54	Iddis & Co.	17	Paul, Dr.	45	Woolley, Sons & Co.	34
Clark, S., & Co.	51	Ingram & Royle	20	Pears, A., & F. (Lim.)	4	Wright, Layman & Unney	Text 398
Olay, Dod & Co.	42	Isaacs, I., & Co.	56	Perry & Co. (Lim.)	35	Wyeth, J., & Bro.	32
Corsan, J. R.	57			Phillips, G., & Co.	53	Wyles (Lim.)	37
Critchley, T.	51	James, W. H.	44	Poths, H., & Co.	55		
Crocker & Co.	Coloured Supplement	Jewsbury & Brown	18	Powell & Barstow	54		
		Jeyes' Sanitary Co. (Lim.)	11	Price's Ondie Co.	45		
Darton & Co.	18	Johnson & Johnson	13	Pyn-ka Syndicate (Lim.)	51		
Day & Sons	52, Text 398					Youldon, E.	50

CLASSIFIED LIST OF ALL ADVERTISERS

Whose Announcements appear in "THE CHEMIST AND DRUGGIST." Those whose Names do not appear in the preceding Index are published in one of the other issues of this month.

ACETIC ACID
Fuerst Bros.
Greiff, E. W., & Co.
Morris & Callard (Salts)

ADVERTISING SPECIALITIES
Lay, J. W.
Sears, F. W.

AMBER & MINERALS
Apolinaris Co.
Barnett & Foster
Chemists' Association (Lim.)
Ellis & Son (Bathing)
Gorstein
Hassall & Co. | Hay, W
Hulsen, J., & Co.
Idris & Co.
Ingram & Royle
Jewsbury & Brown
Johannis Spring (Lith.)
Mills & Co. (Bouree)
Schweppe, J., & Co.

BITTO PLANT
See SYNGES AND ESKENHO.]
Barnett & Foster
Bratby & Hinchliffe (Lim.)
Guert Freres
Tyler, Hayward, & Co.

BOANCIES ABROAD
Australian Drug Co.
Memphorne, Prosser & Co.
Lennon, H. G., & Co. [(N.Z.)
Levy, Jules
Peake, Allen & Co.
Prosser, Taylor & Co.
Rooke, Tompsitt & Co. (Mel-
bourne)
Sharland & Co.
Soul, W. H., & Co.

ALKALOIDS
Howards & Sons (Ginshona)
Smith, T. & H., & Co.

ALMANACKS
Ford, Shapland & Co.
Hildeshelmer & Faulkner
Silverlook, H.
Townsend, J.

AMMONIA
May & Baker (Lim.)
White, A., & Sons
Woolley, Sons & Co.

APPARATUS
Hicks, J. J.
Olson, A. J.
Orme, J., & Co. (Scientific)
Perken, Son & Rayment
Pothe, H., & Co.

BAKING POWDER
Goodall, Backhouse & Co.

SANDAGES
Bailey, W. H., & Son
Robinson & Sons
Sehntes, F., & Co.
Warne & Co.

BESWAX
Boehm, F.
Bowdlear W. H., & Co.
Taylor, A. J., & Co.

BIGARS SODA
Brunner, Mond & Co. (Lim.)
Howards & Sons
May & Baker (Lim.)

BISMUTH PRMP.
Hearon, Squire & Francis
Hewlett & Sons
Howards & Sons
May & Baker (Lim.)
Symes & Co., Tyrer, T., & Co.
White, Alfred, & Sons

BOOKS
Harcroves, Dr., M.D.
Horschell, Dr. | Muter, Dr.

BORAX
Howards & Sons
Mear & Green

BOTTLES
Aire & Calder Bottle Co. (Lim.)
Barnett & Foster
Bratby, R. H.
Bratby & Hinchliffe (Lim.)
Bush, H. W., & Co.
Evans, Sons & Co.
Gilbertson, H., & Sons
Hearn, E. A., & Co.
Isaacs, Co.
Johnson & Jorgensen
Kilner Bros.
Pothe, H., & Co.
Shirley, A. W.
Toogood, W.
"W. Brand Bottles"
Youldon, E.

BOXES
Austin & Co. (Cardboard)
Evans, Sons & Co.
Farmer, I. W., & Co. (Lim.)
Robinson & Sons

BRUSHES
Evans, Sons & Co.

BUNSEN BURNERS
Berend & Co.

BUTTER COLR. & Co. CHEMICALS
Boulton, J., & Co. (Lim.)
Crawshaw & Co.
Fullwood & Bland
Hatriok & Co. (Lim.)
Oldfield, Pattinson & Co.

CAMPHOR
Fuerst Bros.
Howards & Sons
May & Baker (Lim.)

CAPSULES
Denoual, J. (Medicinal)
Duncan, Flockhart & Co.
Evans, Sons & Co.
Hatriok & Co. (Lim.)
Hooper, B. B., & Co.
Mason, C. E., & Co.
Richardson, John, & Co. (Leis-
ester), Lim.

CSGRA SAGRADA
Duneau, Flockhart & Co.
Evans, Sons & Co.
Forris & Co. | Moss, J., & Co.

CASTOR OIL
Allen & Hanbury (Lancet Bros)
Christy & Co. (Aromaticum)
Greiff, E. W., & Co.
Newbery, F., & Sons
Pattison, G. | Solport Bros.

CATALOGUE
Waw, S., Son & Thompson
May, K. Zerts & Co.
Sanger & Sons'

CHECK TILLS
National Cash Till Co.
Patent Voucher Check Till Co.
(Lim.)

CHILDS OF LIME
Government Sanitary Co.
National Chemical Co.

Boehm, F.
Boehringer, C. F., & Sohn
Boulton, J., & Co. (Lim.)
Bramwell, E., & Son
Brunner, Mond & Co. (Lim.)
Fletcher Fletcher & Stanses
Fuerst Bros.
Goodall, Backhouse & Co.
Greiff, E. W., & Co.
Harrington Bros.
Hill, A. S., & Son [Clarke]
Hodgkinson's, Treacher &
Howards & Sons (Pharm.)
Levermore, Aug., & Co.
Lothous & Salmter
Lorens, H.
May & Baker (Lim.) & Co.
Morris & Callard | Moss & Co.
Smith, T. & H., & Co.
Tyrer, T. & Co.
Washington Chemical Co.
White, A., & Sons
Zimmermann, A. & M.

CHEST PROTOTR
Chemists' Association (Lim.)
Hookin, Wilson & Co.
Liverpool Patent Lint Co.
Lynch & Co.
Newbery, F., & Sons
Pattison, G. | Solport Bros.

CHLORODINE
Davaport (Browne's)
Towie, A. P., & Son

CHLOROFORM, &c.
Duncan, Flockhart & Co.
Greiff, E. W., & Co.
Macfarlan, J. F., & Son
Salaman & Co. (Lim.)
Smith, T. & H., & Co.
Wright, Layton & Umney
Zimmermann, A. & M.

CITRIC ACID

Hasall & Co. (Phospho)
COCAINE-HYDRO.
 Howards & Sons

COCA WINE

Armbricht, Nelson & Co.
 French Hygienic Soc.
 Stephen Smith & Co. (Hail's)

COCA & CHOCOLATE

Cadbury Bros. | Christy & Co
 Rowntree & Co.

COD-LIVER OIL

Allen & Hanbury
 Burroughs, Wellcome & Co.
 Evans, Sons & Co.

COFFEE

Essington, T. & Co. (Coffee)
 Essence

COLDS & TUBES

Betts & Co.

COMP. MEDICINES

Allen & Hanbury
 Rylton, Astley & Co.
 Burroughs, Wellcome & Co.

CONCENT. LIQS.

Fletcher, Fletcher & Stevenson
 Lloyd, T. H., & Co.
 Wood, Cooper & Co.

CONFECTIONERY

Rylton, Astley & Co.
 Crawshaw & Co.
 Gibson, R., & Sons

CORN CURES

Pattison, G.

COTTON WOOL

Haynes, G., & Co. (Absorbent)
 Robinson & Sons (Absorbent)
 Sanger, J., & Sons

CRACKED LINSSEED

Graham, W., & Co.

DENTIFRICES

Beecham, T.
 Brounley, R., & Co.
 Lowbury & Brown

DISINFECTANTS

Calvert, F. C., & Co.
 Ellison, H.
 Fletcher Bros. & Co.

DOE MEDICINES

Brants Patent (Lim.)
 Druggists' Sun.

DRUGGISTS' SUN.

Ayrton & Saunders
 Bailey, M., & Co.
 Barclay & Sons (Limited)

DRUGGISTS' SUN.

Beauletto Co.
 Bush, W. W., & Co.
 Chemists' Association (Lim.)

DRUGGISTS' SUN.

Chemists' Association (Lim.)
 Chemists' Mineral Water
 Association (Lim.)

DRUGGISTS' SUN.

Evans, Lescher & Webb
 Evans, Sons & Co. (Savars)
 Fordham, W. R., & Sons (Lim.)

DRUGGISTS' SUN.

Gilbertson, H., & Sons
 Hookin Wilson & Co.
 Idris & Co.

DRUGGISTS' SUN.

Kay Bros. (Lim.)
 Krimmer & Co.
 E. Finch & Co.

DRUGGISTS' SUN.

May, Roberts & Co.
 Newberry, F., & Sons
 Quetch, H. C.

DRUGGISTS' SUN.

Waller & Sons
 Whitte & Sons
 Tidman & Son

DRUGGISTS' SUN.

Wood, Vincent Young, J.
 Burroughs, Wellcome & Co.

DRUGGISTS' SUN.

Ward, Vincent Young, J.
 Burroughs, Wellcome & Co.

ENEMAS

Evans, Sons & Co.
 Sanger & Son
 Strickland, G.
 Warrick & Co.

ENGRAVERS

Barker, W., & Son
 Corsan, J. R.

ESSENCES

Beckett, W., | Berger, F.
 Boehm, F.
 Boulton, J., & Co.

ESSENCES

Brady & Hinchliffe (Lim.)
 Burkyne, Burbridge & Co.
 Bush, W. J., & Co.

ESSENCES

De Carle & Son
 Fletcher, Fletcher & Stevenson
 Goodall, Backhouse & Co.

ESSENCES

Hay, W.
 Idris & Co.
 Lambart, Samuel, & Co.

ESSENCES

Lambart, Samuel, & Co.
 May & Baker (Lim.)
 Meadowcroft & Son

ESSENCES

Newball & Masau
 Oldfield, Pattinson & Co.
 Stevenson & Howell

ESSENCES

Tyrer, T., & Co.
 Tyer, T. (Anchovies)
 Tyer, T., & Co.

ESSENCES

Woolley, Sons & Co.

ESSENCES

Berker, P.
 Boehm, F.
 Bush, W. J., & Co.

ESSENCES

Chirris, A.
 Ulay, Dod & Co.
 Cocking & Co. (Japan Pepper)

ESSENCES

Dodge & Olcott
 Evans, Sons & Co.
 Hodgkinson, Treasher & Clarke

ESSENCES

Lewis, M.
 May & Baker (Lim.)
 Meadowcroft & Son

ESSENCES

Poppeler, W.
 Robert Freres
 Sozio & Andrioli

ESSENCES

Schlesinger, L.
 Stevenson & Howell
 Symes & Co.

ESSENCES

Tombarel Freres
 Treas, R. C.
 Vogt, G., & Co.

ESSENCES

Warrick Bros.
 Wright, Layman & Umney

ESSENCES

Wright, Layman & Umney

ESSENCES

Wright, Layman & Umney

ESSENCES

Wright, Layman & Umney

ESSENCES

Wright, Layman & Umney

ESSENCES

Wright, Layman & Umney

FOOD (Infants & Invalids)

Allen & Hanbury
 Benzer's Food
 Borvill
 Brand & Co.

FOOD (Infants & Invalids)

Evans, Sons & Co.
 Goodall, Backhouse & Co.
 Heaton, Squire & Francis

FOOD (Infants & Invalids)

Idris & Co. (Lim.)
 King, F., & Co. (Lim.)
 Liebig Co.

FOOD (Infants & Invalids)

Liquor Carnie Co. (Lim.)
 Nestle, H.

FOOD (Infants & Invalids)

Formula
 Brooks, T.

FOOD (Infants & Invalids)

Ginger Ale
 Hay, W. (Essence)
 Mullis, W. M., & Co.

FOOD (Infants & Invalids)

Glycerine
 Rylton Astley & Co. (Pastilles)
 Boehm, F., | Fink & Co.

FOOD (Infants & Invalids)

Fruit Juices
 De Carle & Son

FOOD (Infants & Invalids)

Ginger Ale
 Hay, W. (Essence)
 Mullis, W. M., & Co.

FOOD (Infants & Invalids)

Glycerine
 Rylton Astley & Co. (Pastilles)
 Boehm, F., | Fink & Co.

FOOD (Infants & Invalids)

Fruit Juices
 De Carle & Son

FOOD (Infants & Invalids)

Ginger Ale
 Hay, W. (Essence)
 Mullis, W. M., & Co.

FOOD (Infants & Invalids)

Glycerine
 Rylton Astley & Co. (Pastilles)
 Boehm, F., | Fink & Co.

FOOD (Infants & Invalids)

Fruit Juices
 De Carle & Son

FOOD (Infants & Invalids)

Ginger Ale
 Hay, W. (Essence)
 Mullis, W. M., & Co.

FOOD (Infants & Invalids)

Glycerine
 Rylton Astley & Co. (Pastilles)
 Boehm, F., | Fink & Co.

FOOD (Infants & Invalids)

Fruit Juices
 De Carle & Son

FOOD (Infants & Invalids)

Ginger Ale
 Hay, W. (Essence)
 Mullis, W. M., & Co.

FOOD (Infants & Invalids)

Glycerine
 Rylton Astley & Co. (Pastilles)
 Boehm, F., | Fink & Co.

FOOD (Infants & Invalids)

Fruit Juices
 De Carle & Son

FOOD (Infants & Invalids)

Ginger Ale
 Hay, W. (Essence)
 Mullis, W. M., & Co.

FOOD (Infants & Invalids)

Glycerine
 Rylton Astley & Co. (Pastilles)
 Boehm, F., | Fink & Co.

FOOD (Infants & Invalids)

Fruit Juices
 De Carle & Son

MALT EXTRACT, &c.

Allen & Hanbury
 Anderson & Co.
 Burroughs, Wellcome & Co.

MALT EXTRACT, &c.

Heaton, Squire & Francis
 Rames & Co.
 Richardson, John, & Co. (Leicester)

MALT EXTRACT, &c.

Wyley & Co.
 Manicure Prep.
 Dr. Paul's

MALT EXTRACT, &c.

Marking Inks
 Barber, G., & Co. (Orimont)
 Bond, John (Crystal Palace)

MALT EXTRACT, &c.

Medicine Chests
 Burroughs, Wellcome & Co.
 Day, Sons & Hewitt (Veterinary)

MALT EXTRACT, &c.

Menthol
 A 1 Menthol Depot, A. W.
 Shirley, Proprietor.

MALT EXTRACT, &c.

Mercurials
 Fuent Brothers
 Howards & Sons

MALT EXTRACT, &c.

Meth. Spirits, &c.
 Beard & Son
 Burroughs, J.

MALT EXTRACT, &c.

Methylene
 Robbins, J., & Co.

MALT EXTRACT, &c.

Microscopes
 Darton, F., & Co.
 Newsbome, G. T. W. (Slides)

MALT EXTRACT, &c.

Milk
 Nestle, H. (Condensed)

MALT EXTRACT, &c.

Morphia
 Macfarlan, J. F., & Co.
 Smith, T. H., & Co.

MALT EXTRACT, &c.

Oils, Paints, &c.
 Fleming, A. B., & Co. (Lim.)
 Fox, W., & Sons

MALT EXTRACT, &c.

Ointment Bases
 Burroughs, Wellcome & Co.
 Chesebrough (Vaseline)

MALT EXTRACT, &c.

Opticians
 Botwright & Grey
 Darton, F., & Co.

MALT EXTRACT, &c.

Patent Agents
 Horn & Son

MALT EXTRACT, &c.

Patent Medicines
 Anglo-American Drug Co. (Lim.)

MALT EXTRACT, &c.

Papain
 Kuhn B. (Dr. Finkler)

MALT EXTRACT, &c.

Petroleum
 Allen & Hanbury
 Barclay & Sons (Lim.)

MALT EXTRACT, &c.

Photographic
 Barclay & Sons (Lim.)
 Blackfriars Photographic Co.

MALT EXTRACT, &c.

Pills (Coated, &c.)
 Allen & Hanbury
 Anderson Apothecaries' Hall

MALT EXTRACT, &c.

Pills (Coated, &c.)
 Allen & Hanbury
 Anderson Apothecaries' Hall

MALT EXTRACT, &c.

Pills (Coated, &c.)
 Allen & Hanbury
 Anderson Apothecaries' Hall

PEPPERMINT OIL

Bush, W. J., & Co.
 Cocking & Co.
 Patten & Howell

PEPPERMINT OIL

Fancy Soaps
 Barclay & Sons, Lim.
 Bayley & Co.

PEPPERMINT OIL

Beauletto Co.
 Beauden & Co.
 Boehm, F.

PEPPERMINT OIL

Brooks, T. (Solid Perfume)
 Burroughs, Wellcome & Co.
 Bush, W., & Co.

PEPPERMINT OIL

Chesebrough Mnfctrng Co.
 Chris, A.
 Evans, Sons & Co.

PEPPERMINT OIL

Ewen, J., & Sons
 Fuent Brothers
 Grand Fils

PEPPERMINT OIL

Grossmith, J., & Sons
 Hovenden & Sons
 Muhens, F.

PEPPERMINT OIL

Parfick Brothers
 Parsons & Sons (Berdoes)
 Offinger, E.

PEPPERMINT OIL

Pears' Soap (Lim.)
 Price's Patent Candle Co.
 Robert Freres

PEPPERMINT OIL

Rosmarie Mnfgrs. Co.
 Sainsbury, S. (Lav. Welsir)
 Shirley, A. W.

PEPPERMINT OIL

Sozio & Andrioli
 Thompson & Walters, Hole & Tidman & Son (Co. (Lim.)

PEPPERMINT OIL

Tombarel Freres
 Treat, R. C.
 Truefitt, H. P. (Lim.)

PEPPERMINT OIL

Warrick Brothers
 West, T. (O'Neill's Mone)
 Woolley, Sons & Co. (Powder)

PEPPERMINT OIL

Perok of Hydr
 Robbins & Co.

PEPPERMINT OIL

Pharm. Preps.
 Allen & Hanbury
 Anderson & Co.

PEPPERMINT OIL

Baron, Harveys & Co.
 Battley & Watts
 Berger, F.

PEPPERMINT OIL

Boehring, C. & Co. (Sonne)
 Boulton, G. Co. (Lim.)
 Burkyne, Burbridge & Co.

PEPPERMINT OIL

Burroughs, Wellcome & Co.
 Chassaign & Co.
 Delacro, Ch.

PEPPERMINT OIL

Duncan, Flockhart & Co.
 Ferris & Co.
 Fletcher, Fletcher & Co.

PEPPERMINT OIL

Giles Schacht & Co.
 Grant, R. W., & Co.
 Heaton, Squire & Francis

PEPPERMINT OIL

Hewlett & Son
 Howards & Sons
 Jeyes Sanitary Compounds Co.

PEPPERMINT OIL

Keith & Co. (Coat. Tinctures)
 Kingsford & Co.
 Lambert Pharmacal Co.

POLISHING

Bradley & Bourdieu (Patentum)
Fletcher, Raybould & Co.
Fordham, W. B. & Sons (Lim.)
Oskey, John, and Sons
Fyn-ka Syndicate (Lim.)
Stephens & Co.

PORCELAIN GOODS

Toogood, (E.O. Pot. recist.)

POULTRY FOOD

Spratt's Patent (Lim.)

PRECIP. CHALK

Levermore, Aug., & Co.

PRINTING

Bowers Bros.

Cornan, J. R. (Glass)

Ford, Shapland & Co.

Hildesheimer & Faulkner

Silverlock, H. I. Townsend, J.

Townsend, J.

PUMILINE

Stern, G. and G.

QUININE SALTS

Boehringer, C. F., & Sohns

Greiff, H. W., and Co.

Oldfield, Fattinson and Co.

Howard and Sons

Zimmermann A. & M.

RENNET

Clements, S. G., and Co.

Duncan, Flockhart and Co.

Greiff, H. W., and Co.

Oldfield, Fattinson and Co.

SACCHARIN

Allen and Hanbury

Burroughs Bros.

Burroughs, Wellcome and Co.

SALICIN

Macfarlan and Co.

Smith, R. and H., and Co.

SALICYLIC ACID

Burgoyne, Burdidge and Co.

Ernst Bros.

Zimmermann, A. and M.

SALT

Stern, G. and G. (Pepsalia)

SAUCES, PICKLES

Goodall, Backhouse and Co.

Mason, G., and Co. (Lim.)

Tyler, P.

SCHOOLS, &c.

City School of Chemistry and

Pharmacy (Lim.)

Liverpool School of Pharmacy

London Homoeopathic and

Medical School

Manchester Col. of Pharmacy

Northern School of Pharmacy

Sheffield School of Pharmacy

South London School of

Pharmacy (Lim.)

The School of Pharmacy

Westminster College

SEALING WAX

Savage & Co. (Holder)

SHEDS

Potter & Clarke

SHEDS

Brathby and Hinchliffe (Ld.)

Evans, Sons and Co.

Fordham, W. B. & Sons

(Lim.)

Lynch and Co.

May, Robert and Co.

Thosier, P.

SHAVING

Hovenden & Sons (Euxessie)

Lloyd, Mrs. A. S. (Euxessie)

SHIMP DIP

Fletcher Bros. & Co.

Jevons, W. B.

Jeyes Sanitary Compounds Co.

SHIP PATTERS

Bowling and Gowler

Bygrave, J. and W.

Natali, E.

Potha, H., and Co.

Treble, G. and Co.

SOAP

Ayerton and Saunders

Barclay and Sons (Lim.)

Bayley and Co.

Blondeau and Co. (Vineilla)

Bronnley, H., and Co.

Burroughs, Wellcome & Co.

Calvert, F. O., and Co.

Cook, E., and Co.

Fordham, W. B., & Sons (Ld.)

Jeyes' Sanitary Compounds Co.

Mulhens, F.

Pears' Soap

Price, Napoleon, & Co.

Wright, Layman & Umney

SPECTACLES

Botwright and Grey

Darton, F. and Co.

Perken, Son and Raymond

SPONGES

Cresswell Bros. & Schmitts

Evans, Sons and Co.

Feterson, M., and Co.

STAMPS (REVENUE)

Berkley, J.

Hickinson, J.

STARCH

Chancellor & Co. (Mack's

Dunble)

Critchley (Gloss)

STOPPERS

Austin and Co. (Sprinklers)

Barnett and Foster

Melin, O.

Stipendum Stopper Co.

STOVES

Clark, S., and Co. (Lim.)

SUGAR

Fletcher, Fletcher and

Stevenson

Gibson, R., and Sons

SUGAR OF MILK

Burroughs Bros.

SULFONAL

Burroughs, Wellcome and Co.

Greiff, R. W., and Co.

May and Baker (Limited)

SURGICAL

Ayerton and Saunders

Barclay, W. H., and Son

Barclay and Sons (Limited)

Cocking, J. T.

Harrison, T. H.

Haywood, J. H.

Krohne and Sesemann

Liverpool Patent Lim. Co.

Lindsey & Sons

Powell & Barstow

Quelch, H. C.

Richardson, John, & Co. (Lel-

cester), Lim.

Robinson and Sons

Schutze, F. and Co.

Sedox, Absorbents, and Anti-

septic

Warne & Co.

Wood, Vincent

SYRONS

Barnett and Foster

Brathby and Hinchliffe (Ld.)

British Syphon Co.

Fordham, W. B., & Sons (Lim.)

Idris and Co.

Kilner Bros.

Melin, C.

Schweppe, J., & Co.

Thessier, E.

STREPS

Anderson and Co.

De Carle & Son

Fletcher, Fletcher (Liquers)

Paris and Co.

Wood, Cooper & Co.

TABLETS

Bylton, Astley & Co. (Sulphur)

Corean, J. R. (advertising)

TEA

Cave, Johnson & Co.

Gt. Tower St. Tea Co.

Walker and Dalrymple

TEETHING PADS

Marriott, E., & Co.

TEERMOMETERS

Bailey, W. H., and Son

Barclay and Sons (Lim.)

Barton, F., and Co.

Evans, Sons and Co.

Hicks, J. J.

Perken Son and Raymen

TOBACCO, CIGARS,

CIGARETTES

Singleton and Cole (Lim.)

Taddy and Co.

TOILET

Addis, W., & Son

Allen & Hanbury (Chrisme)

Balm of Bethesda

Burroughs, Wellcome & Co.

(Lanoline)

Dee Oil Co. (Lim.)

Hovenden & Sons

Quelch, H. C.

Rowland, A., and Sons

Truefitt, H. P. (Limited)

TOOTH PASTE

Anglo-American Drug Co.

(Lim.)

Beecham, T.

Jewsbury and Brown

Sutton, O., and Co. (Block)

Wilson, A. (Bunter's)

Woods, M. (Arce)

TRADE MARKS

Flouret, J. B.

Horn & Son

Trade Mark Agency

TRUSSES

Bailey, W. H., and Son

Evans, Sons & Co.

Haywood, J. H.

Lindsey & Sons

Wood, V.

TYPEWRITERS

Remington Standard

URETHANE

Howards & Sons

VACCINATION

Himes, Dr.

Vaccine Association (Lymph

VALUERS AND

TENSFR. AGENTS

Berdoe and Co.

Brett, F. J.

Crocker, G. B., & Co.

Orridge and Co.

VASELINE

Chesebrough Manufacturing Co.

VETERINARY

Bird & Storey | Day and Son

Day, Son and Hawatt

Elliman, Sons and Co.

James, W. H. (Hunters)

Jeyes' Sanitary Comp. Co.

Lloyd, T., Howard & Co.

Moockledge, F. E.

Spratts (Dogs)

Walker, Troks and Co.

Webb, Fardon & Co.

Wyleys, Lim.

VINOLIA (Superfitt's)

Blondeau and Co.

WEED KILLER

Acme Chemical Co.

Boundary Chemical Co. (Lim)

Butcher, W., & Son

Horticultural and Agriculture

Chemical Co.

WHOLESALE AND

EXPORT DRUGS

Allen and Hanbury

Anderson & Co.

Barnon, Harveys and Co.

Battley and Watts

Burgoyne, Burdidge and Co.

Bush, W., and Co.

Bush, W. J., and Co.

Clay, Dod and Co.

Coward, G. F., & Co.

Delacre, Ch., & Co.

Evans, Sons and Co.

Evans, Lecher and Webb

Ferris and Co.

For, W., and Sons

Goodall, Backhouse and Co.

Harker, Staggs and Morgan

Hearon, Squire and Francis

Hewlett and Son

Hill, A. S., and Son

Hodgkinson, Treacher and Co.

Lothhouse and Saltmer

Lloyd, T., Howard and Co.

Macfarlan, J. F., and Co.

Oldfield, Fattinson and Co.

Potter and Clarke

Richardson, J., and Co.

Smith & Sons

Symes & Co.

Thompson and Capper

Walker, Troks and Co.

Willows, Francis and Buttle

Woolley J., Sons and Co.

Wright, Layman and Umney

Wyleys, Lim.

WINES, SPIRITS

PLAIN SPEAKING.

The Chemists
of the United Kingdom.

September, 1892.

Gentlemen,

We wish to speak plainly to you on the subject of Pepsin, believing it will be to your advantage as well as ours.

No one can compete with us either in quality or in price, this because of our exceptional position and the chemical talent we employ. A firm that slaughters 1,750,000 pigs a year, and can prepare Pepsin from the stomachs whilst they are absolutely fresh, can well claim pre-eminence, and this we do.

The strength of our Pepsin is never questioned, and we guarantee that each grain we sell will digest 2,500 times its weight of egg albumen.

We ask you why you per oz. for Pepsin of strength, when you can Pepsin at 3/6 per oz., and call for Pepsin, B.P., of ours by the addition We thus enable you to **1/- PER OZ.** This is a it is true, and worthy of

For dispensing fluid Pepsin, we offer you our of which contain 1 gr. of

It is absolutely per- from deposit, and many times stronger than other Glycerine preparations of Pepsin, for some of which you pay as much as 14/6 per lb. Ten minims equal in strength 4 grs. Pepsin, B.P.

We will post you our little work containing valuable formulæ of Digestive Medicinal Preparations free.

Six days a week we are personally interesting medical men throughout the Kingdom in our high-test Pepsins, and everywhere with the greatest success.

In the meanwhile we want to show you that it is to your advantage to use our ferments in your everyday dispensing.

Laboratory,

Chicago, U.S.A.

London Office,

59 & 60 Tooley Street.

Yours faithfully,

ARMOUR & CO.

**"COMPARISONS ARE ODIOUS,"
BUT NOT TO US.**

OUR PRICES.

PEPSIN, 2,500 test ... 3/6 per oz.
Insoluble, Scale, or Soluble Powder.

PANCREATIN, ... 3/6 per oz.

GLYCEROLE PEPSIN, 6/3 per lb.

PEPSIN TABLETS.

Bottles containing 20 ... 8/6 per doz.

" " 75 ... 25/- "

PEPTONISING TABLETS.

Tubes containing 15 ... 7/6 per doz.

OF ALL WHOLESALEERS.

consent to pay 3/6 to 5/- inferior quality and purchase our 2,500 test can, if you still have a make 4 oz. from each oz. of 3 oz. of milk sugar. buy **PEPSIN, B.P.**, AT startling statement, but your consideration.

preparations containing Glycerole, each 10 minims our scale Pepsin.

manent, bright, and free

SPECIAL QUOTATIONS FOR BULK TINS OF 1 LB. AND UPWARDS.

“Places the Administration of Unstable Compounds upon a Sounder and more Scientific Basis.”—*Lancet*.

“Palatinoids” and “Bi-palatinoids” represent all that a Pharmacist requires for an ideal medication. They are extremely elegant in appearance. They are easily swallowed. They are free from excipient, nauseous odour and taste. They are portable, palatable, and convenient.

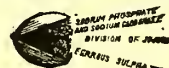
ANOTHER POINT—

“Bi-palatinoids” are a practical and scientific solution to the difficulty experienced in administering the Ferrous Salts in a pure unoxidised state. The Ferrous Carbonate “Bi-palatinoid” far supersedes the unsatisfactory Bland’s pill and other forms where the Salts are mixed—consequently decomposed and inert.

“A perfect Bland’s Pill.”—*Chemist and Druggist*.

Ferrous Arseniate, Hypophosphite, and Phosphate are also prepared pure by the same means.

‘PALATINOID’ & “PALATINOID” “BI-PALATINOID” “BI-PALATINOID”
‘BI-PALATINOID’ OPENED. (FERROUS CARBONATE) (FERROUS PHOSPHATE)



Before immersion in water.

After three minutes' immersion in water at normal temperature of stomach.

OPPENHEIMER, SON & CO., LTD., 14 WORSHIP STREET, E.C.

SECOND SEASON.



SOLPORT'S
“FURFELT”



CHEST PROTECTORS.

Made from the Softest Natural Undyed Lamb's Wool incorporated with the Fur of the Grey Coney, and adjudged by the Trade and its press to be

“AN IDEAL CHEST PROTECTOR.”

PRICES:—

	No.	0	1	2	3	4	5	6	
Single	...	5/6	6/6	9/-	12/-	15/6	20/-	25/-	per doz.
Double	...	12/-	15/-	20/-	25/6	34/-	42/6	52/-	„
Vest Shape...		16/6	22/6	30/-	37/6	46/6	58/6	70/-	„



SOLPORT BROS.
66 Shaftesbury St., New North Road,
LONDON, N.



AND OF ALL WHOLESALE HOUSES.

WYETH'S BEEF JUICE.

A liquid preparation of the Choicest Beef, containing the Nutritious Albuminous principles in an unaltered and soluble form.

Because WYETH'S BEEF JUICE is Pleasant and Agreeable to the taste.

Possesses five times more nourishing properties than other similar preparations.

Nutrient and stimulant properties so proportioned that it can be retained by the stomach in extreme cases of debility.

Two-ounce bottle contains all the Nutritious Albuminous principles of three pounds of clear lean meat.

Because these and many other points of superiority have been brought to the attention of Medical Men, Nurses, and Hospitals.

Because they have proven the claims *TRUE*, the demand for WYETH'S BEEF JUICE has become constant, and constantly increasing throughout Great Britain.

For the information of the

RETAIL CHEMIST

who has not already stocked WYETH'S BEEF JUICE we make this announcement.

GENERAL AGENTS FOR GREAT BRITAIN AND FRANCE—

LONDON. | **ROBERTS & CO.** | PARIS.

DISTRIBUTING AGENTS FOR

LANCASHIRE—JAS. WOOLLEY, SONS & CO., Manchester.

YORKSHIRE—GOODALL, BACKHOUSE & CO., Leeds.

SCOTLAND—RAIMES, CLARK & CO., Edinburgh.

And all Wholesale Druggists and Chemists.

PREPARED BY

JOHN WYETH & BROTHER,

Manufacturing Pharmaceutical Chemists,

PHILADELPHIA, PA., U.S.A.

LONDON, 30 SNOW HILL, E.C.

Progress in Pharmacy.

IN these *fin de siècle* days the inclination of the bulk of physicians is towards monopharmacy and elegance of administration. We see very little of the old shot-gun practice, and gradually more and more of precise diagnosis, with exact antagonism to the progress of disease. The physician of the present day is not more likely to hurl promiscuously a handful of remedies trusting to the off-chance of one constituent affording relief to the suffering patient, than would the Indian sportsman tackle a tiger with a fowling-piece loaded with shot. No; the latter would prefer a rifle and bullet, and the physician inclines towards a medicine certain to combat effectively the onslaught of disease.

ELEGANCE.

The able President, at the recent meeting of the British Pharmaceutical Conference, most aptly described the prominent advantages of the TABLOID form of administration in the following report which appeared in the CHEMIST AND DRUGGIST, on August 27, 1892.

He says:—



"Much progress in Pharmacy has marked our period; many of us remember with a shudder the awful powder, the very thought of which haunted our young dreams, taken in some kind of jam. That does not represent the elegant pharmacy of to-day, and our children can take it in a 'TABLOID.' Much has been done, and more will yet be done, to make the administration of nauseous medicines agreeable."

Another attribute was recently accorded to "TABLOIDS" by that well-known surgeon Mr. Lawson Tait. Speaking at Nottingham, he said, "*Medicine is now made so convenient and agreeable in 'TABLOIDS' that really it is a treat to be ill.*"

UNIFORM ACTIVITY.

NONE other than the purest and most reliable drugs are employed in making the B. W. & Co. PHARMACEUTICAL PRODUCTS; all *Tinctures* used in making the "TABLOIDS" and the "VALOID" FLUID EXTRACTS are STANDARDISED. They will never disappoint the Physician or prove discreditable to the Pharmacist. Be wary! Do not be persuaded to stock those cheap and unreliable imitations, which really have no other claim to consideration than that of *cheapness*. B. W. & Co.'s goods have weathered the stern criticisms of the Medical and Pharmaceutical Press, and have, without exception, received the highest commendations.

If you are willing to co-operate with us, send for price list and terms. We protect your interests by stopping unlimited cutting of our products, and it will be undoubtedly to your benefit, both financially and reputably, to prominently display a good assortment of our well-known pharmaceutical products.

We exchange any slow-going or unsaleable goods of *our manufacture*.

WARNING.—The word "TABLOID" is our registered trade-mark, and is applicable only to compressed drugs manufactured by us.

PRICE LIST SENT FREE UPON APPLICATION.

BURROUGHS, WELLCOME & CO., Snow Hill Buildings, LONDON, E.C.

THE "VASELINE" SOAPS

For TOILET, BATH, and NURSERY, are being largely advertised, & command a ready sale on account of their excellence & cheapness.

"VASELINE" SOAP, unscented, each tablet in card case; boxes of 3 dozen tablets.

SUPERFINE ditto, delicately perfumed, card boxes of 3 tablets.

"VASELINE" TAR SOAP, 10 per cent. of tar, card boxes of 6 tablets.

CHESEBROUGH MANUFACTURING CO., 42 HOLBORN VIADUCT, LONDON, E.C.
Proprietors and Sole Makers of the "VASELINE" Preparations.

VOICE "TABLOIDS."

Composed of COCAINE, Chlorate of Potash, and Borax.



Impart a clear and silvery tone to the voice. Easily retained in the mouth while singing or speaking. Now used by the leading singers and public speakers throughout the world.

DIRECTIONS.—A single "Tabloid" may be slowly dissolved in the mouth to remove huskiness or hoarseness.

Supplied to the Trade in beautifully graven white metal boxes, blue silk labels, 30 and 80 in each, 8s. and 16s. per dozen. Vinaigrette bottles, 30 in each, 8s. 6d. per dozen.

BURROUGHS, WELLCOME & CO., SNOW HILL BUILDINGS, E.C.

JAMES WOOLLEY, SONS & CO.

DRUG MILLERS,

WHOLESALE AND EXPORT DRUGGISTS,

AND

MANUFACTURING PHARMACEUTICAL CHEMISTS,

DEALERS IN

Druggists' Sundries, Chemical and Pharmaceutical Apparatus,
Surgical Instruments, &c.

NEW WAREHOUSE AND OFFICES, VICTORIA BRIDGE, MANCHESTER.

Laboratories and Drug Mills—KNOWSLEY STREET, CHEETHAM.

Telegrams—"PHARMACY MANCHESTER."



ESTABLISHED 1859 AS A MONTHLY. SINCE MARCH, 1888,
A WEEKLY JOURNAL.

PRINCIPAL OFFICE, 42 CANNON STREET, LONDON, E.C.

BRANCH OFFICE, FINK'S BUILDINGS, MELBOURNE,
AUSTRALASIA.

Subscription 10s. per year, payable in advance, including a copy of THE CHEMISTS' AND DRUGGISTS' DIARY next to be published, post free to every country in the world. New subscriptions should date from the commencement of any month.

Supplied only to persons connected with the Trade.
Single copies 4d. each.

Cheques and Postal Orders should be payable to EDWARD HALSE, and crossed MARTIN'S BANK (LIMITED).

SUPPLIED regularly to every member of the following Societies, who have adopted THE CHEMIST AND DRUGGIST as their official organ.

The Pharmaceutical Society of Ireland.
South African Pharmaceutical Association.
The Pharmaceutical Association of New Zealand.
The Central Association of New Zealand.
Otago Pharmaceutical Association.
The Pharmaceutical Society of Queensland.
The Pharmaceutical Society of South Australia.
Tasmanian Pharmaceutical Society.

Literary Contents.

	PAGE		PAGE
"Alpe" for Liverpool Chemists	402	Editorial Comments (<i>cont.</i>)—	
A Mississippi Turpentine	394	The Name of the Article	400
A New Perfume Process	403	Compounding Medical Prescriptions	400
At the Counter	403	Wholesale Research	400
Bankruptcy Reports	397	Shop Hours Act	401
Business Changes	392	Emetime Estimation	416
Cholera Notes	391	English News	386
Commentary	401	Foreign and Colonial News	389
Consuls' Reports	405	French, German, and English Assistants	393
Correspondence:—		French Pharmaceutical News	388
Optum Questions; Molecule's Plan of Campaign; The Irish Examiner in Pharmacy; The Irish Council Election; Country Chemists' Charges; The Cholera Mixture	411	How to get rid of Weevils. By A. J. Salmon	402
Dispensing Notes	412	Indiarubber Teats	402
Legal Queries	413	Irish News	388
Miscellaneous Inquiries	414	Leaves from a Recipe-book	395
Information Supplied	415	Legal Reports	397
Deaths	393	Marriages	393
Disinfectants in Germany	392	New Companies	393
Editorial Comments:—		Personalities	393
The Perfume Drawback	398	Scientific Notes	404
Acetum Scillæ	399	Scotch News	388
		The Perfumery Drawback	390
		Trade Notes	393
		Trade Report	405

EDUCATIONAL.

THE next issue of THE CHEMIST AND DRUGGIST will be the annual Educational number. The editor desires to make the information regarding local facilities for pharmaceutical education in provincial towns as complete as possible, and he would be obliged if secretaries of associations or schools would send particulars of such facilities by Monday first.

The publisher also wishes it to be known that this issue provides an opportunity for enterprising firms directly addressing a class of buyers, such as directors of hospitals

chemical laboratories, and the like whose business is well worth cultivating. Advertisements should be received at the office not later than Tuesday next.

Summary.

A VERY good collection of recipes is given in this number

No meeting of the Pharmaceutical Council was held this month.

AN inquiry regarding Papier Fayard has elicited several practical replies.

WE give a list of the retiring members of the Irish Pharmaceutical Council.

WE give a summary of the Shop Hours Act, 1892, which came into force on September 1.

THE cholera scare, so far as this country is concerned, has abated, and our notes have shrunk accordingly.

WE are able this week to settle the question in regard to acetum scillæ recently referred to by a correspondent.

A BIRMINGHAM drysalter has paid the Pharmaceutical Society 5l. and expenses for having sold Cooper's sheep-dip.

IN an Editorial Note we comment on the part played by the wholesale section in the proceedings of the British Pharmaceutical Conference.

A DRUGGIST's traveller in Liverpool has got six months' imprisonment for embezzling 734l. from his employer in the course of eighteen months.

IN our Correspondence section "Molecule" defends his plan of campaign against our criticisms. Another chemist warmly supports him.

A FRENCH contributor communicates some noteworthy facts in regard to the capabilities of assistants to chemists in the South of France.

SOME interesting analytical evidence in regard to salt in beer has been given by Dr. Attfield in a case under the Sale of Food and Drugs Act in Wales.

A NUMBER of Liverpool chemists have been found to be inadequately informed in reference to the Medicine-stamp Act, and have had to pay for their ignorance or carelessness.

A JAMAICA chemist sends us a short contribution giving a curious hint as to a simple means of getting quit of weevils, moths, and such-like objectionable visitors to druggists' stocks.

THE Irish Pharmaceutical Council are indignant with the Lord Lieutenant on account of the reduction by him of penalties imposed in the case of infringement of the Irish Pharmacy Act.

SOME very interesting dispensing queries are discussed in our Correspondence columns, and a settlement is desired on the question whether zinc-chloride injections should be sent out clear or milk-white.

FURTHER notes in reference to the estimation of morphia in laudanum are given in our Correspondence; and Mr. Gerrard makes an important correction in our report of his process for the estimation of grape-sugar.

THE General Order concerning the drawback on exported flavouring-essences and perfumed spirits has been issued by the Board of Inland Revenue this week, and is printed in full in this number. It grants practically all that has been asked for.

OUR drug-markets are fairly active this week. The principal movement has again been in articles used as cholera remedies or disinfectants, but there is every indication that the demand for these is on the wane, and that the high prices which held when the epidemic was expected to break out almost every day can no longer be maintained. Bleaching-powder is the only exception to this rule.

English News.

Chemical-manufacturers' Scales.

The Secretary of the Manchester Chamber of Commerce has approached the Manchester Office of Weights and Measures with the inquiry whether scales and weights used for mixing purposes exclusively fall within that section of the Weights and Measures Act which enjoins absolute accuracy of the instruments used in the measuring and weighing of goods. "It is a fact," says the Secretary, "that weights and scales are extensively used in chemical-works for the simple purpose of mixing proportionate quantities of raw materials used in the various processes, and not in the weighing of goods sold; and that the manufacturers find it quite impracticable to keep their mixing scales and weights absolutely correct, in consequence of the corrosive action of the materials dealt with, but exactness in these operations is not requisite." The Weights and Measures Committee have promised to consider the matter.

The Middlesborough Chemical-trade.

Messrs. Sadler & Co. (Limited), chemical-manufacturers, of Middlesborough, have issued their annual report and balance-sheet for the year ending June 30. The accounts show a credit balance of 13,103*l.* 17*s.* 1*d.*, which has been applied in the following manner:—Interest on debentures and loans, 5,656*l.* 5*s.* 2*d.*; depreciation and renewals, 5,617*l.* 19*s.* 2*d.*; directors' (one-half of the amount voted) and auditors' fees, 650*l.*; balance to be carried forward, 1,179*l.* 12*s.* 9*d.* The directors say that the year has been marked by a very serious shrinkage in the prices of the company's products, with the exception of bichromes, which have now been put on a satisfactory and profitable footing by an arrangement amongst the English and foreign makers.

Embezzlement by a Druggist's Traveller.

In the Liverpool Police Court, on September 2, before Mr. Kinghorn, deputy stipendiary magistrate, Reginald Malcolm Stuart Day, commercial traveller, was charged with embezzling several sums of money belonging to his employer, John Thompson, wholesale druggist, Hanover Street. Chief Inspector Marsh presented on behalf of the police, and Mr. Neale appeared for the prisoner.

Mr. Marsh said that the prisoner was a traveller and collector for Mr. Thompson, and in these capacities had received certain sums of money from customers all over the country, which he had failed to hand over to his employer.

Henry Holland, a Middlewich chemist, stated that on March 14 prisoner called upon him, and received from him 74*l.* 2*s.* on Mr. Thompson's behalf. On June 13 witness further handed prisoner 56*l.* 6*s.*

William Gabites, chemist, of Upper Warwick Street, Liverpool, stated that he paid prisoner 14*l.* 5*s.* 7*d.* for Mr. Thompson on May 23.

Isaac James Nicholson, Mr. Thompson's cashier, said that prisoner had received 250*l.* a year with travelling expenses, and his duties had been to solicit orders and to collect accounts. On March 19 prisoner gave him a statement of the cash he said he had received during a journey he had just completed. The sums he had received from the witness Holland did not appear in the statement, and prisoner had made no explanation about it since. The same was the case with regard to the money paid by the witness Gabites. After the books had been made up and passed, prisoner had added entries which appeared to show that these sums and other sums had been properly accounted for. The total amount for which prisoner had not accounted was 734*l.*

In reply to questions from the Bench, Mr. Thompson now stated that prisoner had been in his employ for nine years. Up to two years ago he had well and efficiently discharged his duties. About eighteen months ago, however, he had taken to drink and loose company, and these had been the cause of his fall from rectitude.

Mr. Neale, for the prisoner, said that was so. Prisoner's prospects had been ruined by his conduct, and he (Mr. Neale) hoped that the Bench would take this fact and that

of his previous good character into consideration in passing sentence.

Mr. Kinghorn said he fully realised these facts. At the same time, he realised that it was the prisoner's previous good conduct that had gained him the responsible position which he had abused. He (Mr. Kinghorn) would not be doing his duty by society if he let it be supposed that previous good conduct and an expression of contrition freed persons from the results of such actions. Day must go to prison for six months.

Helping Himself.

At the Edmonton Bench on September 1, Henry Frank Sugden, 42, a veterinary surgeon, of 33 Truro Road, Wood Green, was charged with stealing from 4 Commerce Road, Wood Green, a bottle containing oil of dill, value 2*s.*, the property of James Celissier Douglas, chemist. Mr. Douglas said the defendant entered his shop with a friend on August 30, and the friend called for a "pick-me-up." He was supplied, and meanwhile the defendant conversed about drugs, and after a time went towards a cupboard in which chiefly poisonous drugs were kept. Witness tried to stop him, and the prisoner caught him by the throat and forced him aside. The prisoner's friend said, "Don't choke the old chap," and the prisoner released him, took a bottle out of the cupboard, and left the shop. His friend called to him to restore the bottle, and afterwards promised witness to bring it back. Neither of the men, however, returned, but shortly after witness met the prisoner outside the Nightingale Hotel. He fetched a constable and gave him into custody. In cross-examination witness said he had known prisoner since last May, when he was introduced as the Hon. Henry Sugden, grandson of Lord St. Leonards. Since then prisoner had only made one purchase of witness, and that had never been paid for. The policeman said when he took prisoner into custody he said, "I haven't got the bottle, and know nothing about it," but immediately afterwards produced the bottle from his pocket and offered it to prosecutor with the remark, "You sold it to me." The Chairman said the Bench were not satisfied that the prisoner intended stealing, and dismissed him. He added that it was a discredit to behave as the accused had done.

Sheep-dips are Chemists' Trade.

The Pharmaceutical Society is making a fair addition to its income out of the illegitimate traders at Birmingham. A local drysalter, to oblige a stranger, procured for him a packet of Cooper's sheep-dip. His amiability cost the obliger 5*l.*, plus expenses.

Stuck to his Uniform.

Walter Parker, a stableman, lately employed by the Wanga Company (Limited), which seems to be on the track of the Sequah Company, was charged before the Kingston-on-Thames Magistrates on September 2, with having stolen two uniforms and a pair of top-boots, value 14*l.* 10*s.*, the property of his employers. He had been discharged on the previous Saturday, and it was alleged that he had taken the things away with him. Detective Fuller stated that he arrested Parker in High Street, Barnet, on the previous day, when, in answer to the charge, he admitted that he took the uniforms away, but alleged that money was owing to him, and that he was going to take them back again. Witness produced a coat, vest, and hat, profusely adorned with gilt lace, which were found at the prisoner's lodgings, but the remainder of the uniform had not been discovered. Parker was in the Barnet Militia, and did not bear a very good character. Sentenced to a month's imprisonment with hard labour.

Chemists and their Wives.

William Henry Denny, a retired chemist, living in the Barking Road, appeared at the West Ham Court on Monday to answer a charge of assaulting his wife. Mrs. Denny said she came home on Sunday, from her sister's, at about 11 P.M. Her husband struck her in the face in the passage. They had been married over thirty years, and this assault was not the first by a hundred. Prisoner said that it was all through his wife having a man calling at the house to take her for a walk. During the three years he had been out of business she had been going on like that. He wanted a

separation. The defendant was remanded for further evidence.

At Epsom Police Court, George Radcliffe Keeling, chemist, of Epsom, summoned his wife, Ellen Elizabeth Keeling, for the discharge of an order made on May 12, 1890, at Epsom Petty Sessions, by which he was ordered to pay 30s. per week towards the support of his wife until such time as the order should be waived or discharged. Mr. Harte, for the plaintiff, applied for an adjournment. His principal witnesses, he said, were in Yorkshire. He also said he intended to take opinion of counsel whether it would not be wiser to withdraw the summons altogether and go into the Divorce Court. The Bench refused the application, and Mr. Harte thereupon withdrew the summons, and the Bench allowed the defendant 3*l.* 3*s.* costs.

His First Drunk.

Albert Lewis, 58, a travelling herbalist, who wore turban and white surplice and had a general Hindustani appearance, admitted to the Loughborough Magistrates that he had been drunk in the market-place of that town, where, according to the police-officer, he had been selling some powder which was to heal all diseases. Albert was very repentant, and so disgusted with and ashamed of himself that the Alderman let him go on his promise to leave Loughborough.

A Coroner who Knows the Law.

An inquest was held at Cambridge a few days since, respecting the death of a woman who had killed herself by taking laudanum, which she had bought from the shop of Mr. Deck. Mr. John Bonnett, Deputy Coroner, said there was one point upon which the jury might wish to be informed. He had himself seen the chemist who sold the laudanum to the deceased, and had suggested that the assistant who served Mrs. Wheal with the poison should be at the inquest. He was not, however, there. He (the Coroner) would like to inform the jury that by the Pharmacy Act it was unlawful for a chemist to sell a poison of that kind unless the bottle bore distinctly a label with the name of the article, the word "poison," and the name and address of the seller. On the bottle now produced he found the words, "Laudanum. Poison. Arthur Deck, chemist, King's Parade, Cambridge," plainly printed. Therefore it had been a perfectly legal sale, as all the requirements of the Act had been complied with. Laudanum was not a poison which necessitated entering the name of the purchaser in a book, but could be sold as it had been in this case. Therefore, he did not think it was necessary to adjourn the inquest for the purpose of summoning the chemist or his assistant to give evidence. He believed that everything had been done to make the sale a legal one.

From Manchester.

Mr. Peter Allen, one of the proprietors of the *Manchester Guardian and Manchester Evening News*, who was buried in Prestwich Churchyard on Monday, was in early life connected with the drug-trade. He was for many years engaged with Messrs. Gale, Baker & Warde, wholesale druggists, London.

Mr. G. W. Pratt, chemist and druggist, Manchester, has been appointed to succeed the late Mr. Barnaby as visiting apothecary at the Chorlton-on-Medlock Dispensary.

The next session of the Manchester Pharmaceutical Association is to commence on October 12. As in previous years the meetings will be held in the rooms of the Chemical Club at the Victoria Hotel. At present the membership is between seventy and eighty, and Mr. A. Blackburn, the hon. secretary (address, 7 Exchange Street, Manchester), asks us to say that he will be glad to hear from gentlemen who may be desirous of joining. In some previous years there has been a sad lack of papers to read and a still more sad lack of audience to read them to. Last session showed a considerable improvement in these two respects, and it is expected that a still greater advance will characterise the coming session. It appears that papers enough have been already promised to keep the Association going during the whole session.

The valuable prizes offered by Mr. Wm. Stones, in the form of herbaria of medicinal plants, have not yet aroused the apprentices and assistants of Manchester and the district to any extraordinary display of activity. Only about a

dozen of them have entered for the prize competitions which were announced in this journal on August 6. The last date for receiving names is September 19. Students who still desire to compete should read the paragraph referred to on page 196 for particulars.

An Analyst's Charges.

The South Stoneham Rural Sanitary Authority, at their last meeting, discussed the charges made by Mr. Angell, analyst, with respect to a recent inquiry at Eastleigh. Mr. Angell had sent in a bill for twenty guineas for services rendered in connection with the sewerage works. The charge was considered too high, and Mr. Angell was requested to send in particulars, which were read out at the present meeting. Mr. Harris said he thought it was money enough, and Mr. Willmer said it was a great deal too much, while Mr. Calma-Seymour remarked that the charge for the analyses (seven guineas) seemed excessively high. Mr. Payne observed that it seemed to be a lucrative profession, but Dr. Parn observed that the charges for the analyses were the usual ones. After further discussion it was decided to pay the bill.

A Grocer's Sixpennyworth.

A Blackburn grocer is determined not to be outdone by the prize-tea shops. He announces that for twenty-eight days he will sell $\frac{1}{2}$ lb. of tea for 6*d.*, and will give with it "ten packets of blacklead, twelve boxes of matches, one tin of coffee, two baking-powders, and one tin of mustard." And he assures the editor of the *Grocer* that on this transaction he still has $7\frac{1}{2}$ per cent. profit for himself.

Pasteured Five Years Ago—Dead Now.

Two brothers were bitten by a mad dog at Amberworth, near Huddersfield, five years ago, and were treated by Pasteur a few days afterwards. Five weeks later one of them, Fred Lindley, died of hydrophobia. On Thursday last week, while going to work, the other brother, Herbert, aged 17, picked up a stone and threw it violently, explaining, when asked, that he felt a pricking sensation inside, just as he felt in Paris when operated upon. Throwing the stone, he said, had taken the sensation away. On Sunday he showed an aversion to liquids, and on Monday had a convulsion. He then suspected what was the matter, and told his parents not to bother: he was going to Heaven to rest. He was removed to the infirmary and died there on Tuesday. The medical evidence given to the jury on Wednesday was that it was an undoubted case of hydrophobia, and a verdict was returned of death from hydrophobia, caused by the bite of a dog five years ago.

October Examinations.

Candidates for the Minor and Major next month should note that, under the new regulations, applications and fees must be sent to Mr. Bremridge, 17 Bloomsbury Square, W.C., not later than September 16.

Wine licences

have been granted to Mr. J. W. Aplin, chemist, Chislehurst; to Mr. Albert Archer, chemist, St. Mary Church, Torquay; to Mr. Arthur Ogleby, chemist, Barnsley; to Mr. Williams, chemist, Tanbridge Wells; to Mr. Aspinall, chemist, Wigan; and to Mr. H. Drewery, chemist, Wombwell. Mr. Crooke, Walsall Drug-stores, Park Street, Walsall, applied at the Brewster Sessions of that town for a licence to sell medicated wines to be consumed off the premises. The applicant being neither the owner nor the occupant of the premises, the application was not granted.

At the Todmorden Brewster Sessions, Mr. J. C. Stevenson, chemist, Todmorden, applied for an off spirit-licence for his premises at Pavement, in addition to the wine-licence he already holds. The Todmorden Band of Hope Union opposed the application, and, in order to get over a technical objection raised, the applicant's solicitor asked for an adjournment, which was granted until September 22.

PYTHON OIL.—The Sinhalese regard the oil which is obtained by boiling down the fat of the python snake as one of their most precious medicines.

Irish News.

The Council Election.

The following members of the Council of the Pharmaceutical Society retire by rotation next month, but are eligible for re-election, and will offer their services again:—George H. Grindley, M.P.S., Patrick Merrin, M.P.S., William Hayes, M.P.S., Samuel Gibson, R.D., Johnston Montgomery, M.P.S., Henry Conyngham, M.P.S., William F. Wells, jun., M.P.S. These, with the exception of Mr. Gibson, are all pharmaceutical chemists. Candidates for the Council must be proposed and seconded by members or associates of the Society, and the names sent in to the Registrar not later than September 17. The election will take place at the annual general meeting, to be held on Monday, October 3, at 7.30 P.M.

Perfecting the Evidence.

In the Dublin Police Courts on Tuesday last, before Mr. Byrne, Q.C., Mr. Clay, solicitor for the Pharmaceutical Society, and Mr. Wylie, for Messrs. Samuel and Walter Boyd, attended by agreement to have the evidence taken in the late prosecutions for breaches of the Pharmacy Act on July 23 and 26 last placed in due form, with a view to any further steps which may be taken in the matter.

Reported to the Council.

The Under-Secretary to the Lord Lieutenant (Sir West Ridgeway) has reported the case of the sale of tartar emetic in mistake for tartaric acid by a chemist and druggist to the Council of the Pharmaceutical Society. It is difficult to understand, however, what steps they can take in the matter. It will be remembered that the family of the Rev. Mr. Irwin, of Castlederg, suffered severely in consequence of the mistake, and that the child of a servant, born since its mother partook of the poison, has since died. The inquest on the child is adjourned till September 12, and it is then expected that the report of the analysis of the stomach and intestines will be submitted. The shopkeeper who is stated to have sold the poison is said to have been a chemist and druggist registered under the Pharmacy Act of 1830.

Pharmaceutical Examinations.

Candidates for the Preliminary examination, to be held on Monday, October 3 next, are required to give seven clear days' notice of their intention to present themselves, and also must lodge the fee of 2*l.* 2*s.* prior to giving such notice.

Candidates for the Licence examination, to be held on October 5, 6, and 7 next, are required to give fourteen clear days' notice of presenting themselves, and send bankers' receipt that the fee of 5*l.* 5*s.* has been lodged to the credit of the Society.

Registered Druggists' Examination.

At the examination held in Dublin on Thursday, September 1, the following were successful:—J. Crawford, W. K. Fayle, T. J. Jackson, J. O'Dea, R. J. Savage, E. H. Woods. Two candidates were rejected.

Medicine Contracts.

The Board of Guardians of Dungannon Union have re-appointed James Nithery, pharmaceutical chemist, Dungannon, contractor for medicines and medical appliances, &c., to the workhouse hospital and various dispensaries of their districts.

The Boards of Guardians of the following Poor-law Unions and Dispensaries are open to receive tenders for the supply of drugs and medical necessities. The tenders will be decided upon on the appended dates:—Balrothery Union, September 14; Navan Union, September 14; Limerick Union, September 14; Kells Union, September 17; Stokestown Union, September 23.

Poisons in Workhouses.

A female nurse attached to the Macroom Workhouse is alleged to have administered iodine internally to a patient instead of externally as directed. The nurse says the patient took part of the iodine under the impression that it was a

cough-mixture. The Local Government Board, under whose notice the case has been brought, animadvert strongly on the stupidity of not keeping poisonous preparations in safe custody, and direct that in future similar compounds must be kept under lock and key. The case is likely to form the subject of a sworn inquiry.

The Council-meeting.

At the monthly meeting of the Pharmaceutical Society held on Wednesday, September 7, sixty-five registered druggists were proposed and seconded by Messrs. Gibson and Boyd as associate members of the Society. Of this number six were objected to by various members of the Council as having been convicted of offences against the Pharmacy Act, and were accordingly rejected. Four others were also rejected for not having paid their fees; the remainder were elected. Mr. Wells proposed twenty pharmaceutical chemists and druggists for membership. Reports of the various prosecutions were placed before the Council, and it was announced in the case of the two penalties of 5*l.* each inflicted on Mr. Gorman, of Bangor, recently, that the Lord Lieutenant and Privy Council had, on memorial, reduced each of the penalties to 1*l.* A letter of remonstrance was ordered to be sent to the Lord Lieutenant, pointing out the injustice and impropriety of such interference with the proper carrying-out of the law as laid down by Act of Parliament.

Scotch News.

Aloes for Gregory.

A young woman was admitted to the Edinburgh Royal Infirmary at the end of last week who had taken a large dose of aloes in the belief that she was taking Gregory's powder. A few hours' treatment and the use of the stomach-pump sufficed to restore her. She had stolen the drug at a chemist's in the town.

Edinburgh Pharmacy Athletic Club.

The third monthly golf-competition for the Dick Challenge medal took place on Saturday last, on the Braids course, in somewhat unfavourable weather. Mr. J. P. Gibb was the winner, Mr. T. D. Burt being second.

Well Chronicled.

Mr. Thomas Robinson's succession to Mr. Pottage's Glasgow business seems to have aroused the interest of the Glasgow press, the *Evening News* "Echoist" having startled the denizens of the St. Mungo by announcing a "miss of Pottage" in the next P.O. Directory; while the *Southern Press*, *Modern Church*, and *Scottish Pulpit* regard the event as one for eulogistic references to the new proprietor. Mr. Robinson is a Yorkshireman.

French Pharmaceutical News.

(From our Paris Correspondent.)

RELIGIOUS PHARMACY OR PHARMACEUTICAL RELIGION.—The French priests are admirable in their ingenuity, and they have quite a gift for knowing what is likely to take the public fancy. They have at times been prosecuted for the illegal sale of medicines, elixirs, and the like, and now, taking advantage of the fear of cholera which fills the minds of so many people at the present time, a religious newspaper inserts the following announcement: "ANTICHOLEERIC SCAPULARY.—These scapularies, on which are embroidered the likeness of the Virgin Mary, are marvellously effective in protecting the faithful against indisposition from cholera. They have also been blessed by our Holy Father the Pope. N.B.—The length of the material enables the scapulary to cover the stomach. Being placed on this part of the body diarrhoea is immediately stopped. The anti-choleric scapularies may be obtained through the post by sending 4*f.* 50*c.* to Abbé G—, retired Naval Chaplain, Tonlon (Var)."

THE RESPONSIBILITIES OF PHARMACISTS AND DOCTORS.—Referring to the paragraph under this heading in the "French

Pharmaceutical News" of February 6 last, it is perhaps worth while recording that the St. Etienne doctor has been acquitted of the charge of "poisoning by imprudence" that was brought against him. The medical experts laid down that it is difficult to precisely specify the limit at which nitrate of aconitine is dangerous. They found also that the aconitine delivered by the pharmacist was more poisonous than the official aconitine. The doctor was shown to be in the wrong because he had given the deceased verbal instructions as to the manner the medicament was to be taken, but the patient, having been a herbalist, was held to be able to better understand the way medicine should be taken than an ordinary person. For these and various other reasons the doctor was acquitted, while part of the responsibility was saddled on the pharmacist.

HIGH RENTALS.—The rents of shops in Paris, especially in the very central quarters, are excessively high. One or two of the English pharmacists count amongst the largest rent-payers in proportion to the size of their premises. As already stated in *THE CHEMIST AND DRUGGIST*, the rent of a well-known pharmacy near the Place Vendôme is 1,000*fr.* a year. A French firm of perfumers and soap-makers have, however, just opened a shop forming a corner to the Boulevards and the Place de l'Opéra, the rent of which is 2,400*fr.* per annum. The premises are by no means large, and nothing is sold but the specialities of the house. Doubtless the position is looked upon as giving an excellent advertisement, and it is, perhaps, moderate at the price.

Foreign and Colonial News.

NEWFOUNDLAND COD-LIVER OIL.—The Newfoundland Parliament has taken steps to encourage amongst the cod-fishing people the use of the Norwegian system for making the oil.

SUCCI'S SUCCUS.—Succi, who is fasting at Naples, sent samples of his "secret sustaining-draught" to the Central Hygienic Office in Rome, asking to be allowed to sell it. The Hygienic Department has, however, declared that according to Italian law the mixture can only be sold by pharmacists upon medical prescription, as analysis has proved that it contains poisons.

U.S. TRADE-MARKS.—The following were registered at Washington on August 23:—"Pink-iron," for pills, by W. T. Hanson Company, Schenectady, N.Y.; "Anti-dandruff," for a scalp-wash, by Lem. A. Smith, New York; "Worm Syrup," and a signature for the same, by Dr. David Kennedy Corporation, Kingston, N.Y.; "Margnerite," for toilet preparations, by Marguerite V. Botts, Philadelphia; "Elixir of Bananas," on a label, for a constipation remedy, by W. F. Harris, Adrian, Ill.; "Dodd's Kidney Pills," on a label for the same, by J. A. McKee, Toronto; "Syrup Oatmeal Phosphate or Oatmeal Syrup," on a figure of a cask, for a phosphate beverage, by Rose Bros., Camden, Me.

ANTIPIRYN AND ITS OFFSPRING.—According to the *Pharmaceutische Zeitung* a large number of antipyretics introduced during the last two or three years are simply more or less disguised forms of antifebrin. Thus "antikamnia" contains from 70 to 85 per cent. of antipyrin with 15 to 20 per cent. of bicarbonate of soda and traces of tartaric acid and caffeine; "antinervin" is composed of antifebrin 50 per cent., salicylic acid 25 per cent., bromide of ammonium 25 per cent.; "exodyne" of antifebrin 90 per cent., bicarbonate of soda 5 per cent., salicylate of soda 5 per cent.; "phenolid" of antifebrin 50 per cent., bicarbonate of soda 50 per cent.; and "antikol" of antifebrin 75 per cent., bicarbonate of soda 17½ per cent., tartaric acid 7½ per cent.

THE DOCTOR WOULD NOT FIGHT.—On the occasion of the official inspection of a pharmacy in a large provincial town of Hungary, one of the visiting inspectors, a physician, made some disparaging remarks on the fact that the pharmacist used business note-paper with the name of his firm printed upon it. The inspector appears to have regarded this as an advertisement unworthy of a professional man. The apotheker felt offended, and promptly sent his two assis-

tants as seconds with a challenge to the doctor's residence. The physician declined to fight a duel, on the ground that he had made the disparaging observation in the exercise of his public duty, and further brought a charge of breaking the peace against the pharmacist. The latter has taken out a cross-summons against the doctor for "insulting his honour."

PROPOSED HYGIENIC REFORMS IN TURKEY.—Dr. F. Zanni, a well-known Constantinople pharmacist, who will be remembered in pharmaceutical circles as one of the chief participants in various international pharmaceutical congresses, has addressed a memorandum to the Turkish Minister of the Interior, in which he calls attention to the necessity for enlarging the powers and increasing the means at the disposal of the Upper Council of Hygiene, which was established in Turkey about eleven years ago. Mr. Zanni proposes the establishment of a new Department of Health, the head of which should be a hygienist of note, and have as his advisers a Board composed of the Director of the Imperial School of Medicine, the President of the Medical Society, the chief Sanitary Inspector, and several medical men, professors, and pharmacists. The new Department would have charge of the administration of the pharmacy laws, of the analysis of food and drugs for public purposes, and of the medical police. By way of inauguration of this new department, the Sultan, Dr. Zanni thinks, should decree an International Conference of Public Health and Hygiene to be held at Constantinople. This is a specimen of the questions which Dr. Zanni would have the Congress deliberate upon: "The creation of a system of control on the hygienic condition of each traveller on his arrival at the first frontier station of a country. Under this system any man who undertakes a journey abroad would be obliged to carry a passport, certifying that he is not suffering from any disease, and stating the date of his last examination." We are afraid the century is a little too old for Dr. Zanni's Congress.

PRIZES FOR CHEMISTS.—The Industrial Society of Mulhouse (Alsace) has at its disposal several sums of money bequeathed to it by local manufacturers for the purpose of encouraging the improvement of Alsatian industries. Several of these prizes (which will be awarded in the course of 1893 and 1894) are for chemical subjects. Apparently, citizens of all nations are allowed to compete, and no special language in which papers must be written is indicated. Essays for the competition must be sent, before February 15 1893, to "M. Le Président de la Société Industrielle de Mulhouse." Among the prizes to be awarded are the following:—A medal of honour for the best paper on the chemical composition of the bodies created by the action of sulphuric or hydrochloric acid upon vegetable oils, especially olive and castor oils. A medal of honour and a sum of 1,000*fr.* for a substance which shall be able to replace, in the manufacture of dyed linen, the use of dry egg-albumen; the substitute must be procurable at a much lower price than egg albumen, and produce colours at least as fast as does the latter. A medal of honour and 5,000*fr.* for a colourless blood-albumen which shall not be coloured by the action of steam. A silver medal for the best essay on the chemical changes which are caused in wool by the action upon it of hypochlorites, and of chlorine and its oxygen-compounds generally. A medal of honour for a theoretical and practical treatise on cochineal-carmine, showing whence arises the inferiority of the products obtained by methods indicated in handbooks of chemistry as compared with those actually sold in commerce, and indicating why the whole of the colouring-matter is not transformed, and should not be transformable into carmine. A medal of honour for the introduction of an artificial indigotin which shall be able to compete with natural indigo in all its applications.

THE CONSTITUENTS OF STROPHANTHUS.—J. J. Hofman has obtained from green strophanthus-seed, by treatment with petroleum ether, 32 per cent. of a fatty oil, while the brown seed, treated in the same way, yielded 29 per cent. The specific gravities of these oils were 0.9125 and 0.9313, the iodine-absorption numbers (by Hübl's method) 83 and 96, the saponification numbers 183 and 193. The bulk of the oil appears to consist of the ester of oleic acid. Of odorous fatty acid there were only very minute traces present.

THE PERFUMERY DRAWBACK.

THE following is the text of the General Order authorising a drawback on perfumed spirits and spirituous flavouring essences when exported from the United Kingdom:—

GENERAL ORDER CONCERNING THE DRAWBACK ON EXPORTED FLAVOURING ESSENCES AND PERFUMES SPIRITS.

Inland Revenue, Somerset House,
London, W.C. August 30, 1892.

THE Lords Commissioners of her Majesty's Treasury having sanctioned the repayment of duty charged on the spirits used in the manufacture of flavouring essences and perfumed spirits exported by licensed rectifiers and compounders, when such essences are not made in bond,

It is ordered:—

1. That a rectifier, or compounder, intending to export flavouring essences or perfumed spirits on drawback, must comply with the following regulations:—

2. Twelve hours' notice must be given to the officer on Form No. III.—5, prepared for the purpose.

3. The officer will attend at the notice hour and check the contents of the bottles with a suitably graduated measure to be provided by the revenue.

4. The total quantity of flavouring essences or perfumed spirits in any one consignment for exportation examined at any one attendance of the officer must be not less than 2 bulk gallons, except under the special sanction of the Board, and subject, if so ordered, to a special charge for the attendance of the officer.

5. One sample out of every ten, or fraction of ten kinds, whether of essences or perfumed spirits, is, as a rule, to be taken by the officer. A larger proportion of samples may, however, be taken, should the officer in his discretion think it necessary.

6. The samples of flavouring essences are in all cases to be sent to the laboratory; but, usually, the strength of the samples of perfumed spirits shall be tested by the officer and the samples returned at once to the exporter.

7. In cases of doubt, arising from any peculiarity of the perfumed spirits, suggesting that the hydrometer does not afford an accurate indication of the strength, a sample should be sent to the laboratory; and also in all cases where the strength found by the officer is less than that declared by the exporter by more than 2 per cent.

8. The quantity drawn for a sample to be sent to the laboratory is to be not less than 3 oz. of perfumed spirits and 1 gill of flavouring essences. The sample may be contained in, or taken from, separate bottles, but the contents of all the bottles must be of the same strength. These samples are to be labelled with the name of the flavouring essences or perfumed spirits, and the original notice to export (Form III.—5) should be forwarded by the first post to the laboratory.

9. The name of the particular flavouring essence or perfumed spirits must be stated on the label attached to each bottle, and every case must be branded or inscribed with a progressive number and distinguishing mark, the bulk gallons contained therein, the name of the person for whom the goods were bottled, or a special mark without a name, and the words "flavouring essences" or "perfumed spirits," as the case may be.

10. Every case after the bottles have been counted, the strengths ascertained by the hydrometer or samples taken for the laboratory, and the contents compared with the specification, must be packed, closed, and securely fastened with tape or wire at the trader's expense, and sealed by the officer with a revenue seal.

11. There is no objection to the refilling of the bottles sampled with flavouring essences or perfumed spirits of the same kind and strength should the exporter so desire, or to the substitution of bottles already filled, labelled, &c., for packing, of similar kind, size, and strength.

12. The full particulars of the several cases, and the total bulk gallons of each consignment, must be entered in an

opening in the survey book according to the following precedent:—

Number of cases	Marks on cases	Progressive numbers	Description of		Content of six bottles to the thousandth part of a gallon	Number of dozens of bottles of each size in each case	Quantity in bulk gallons	Declared strength in terms of proof	Strength of spirits as found at the laboratory, or by the officer	Proof gallons
			Flavouring essences	Perfumed spirits						

13. The officer should certify, at foot of the notice (Form III.—5), that the contents of the cases agree with the specification.

14. If on testing the strength by the hydrometer, or on examination of the sample at the laboratory, the average strength is found to be less by not more than 2 degrees than that declared by the exporter, the declared strength will be regarded as correct, and drawback, &c., allowed accordingly.

15. If, however, the average strength found be less by more than 2 degrees than that declared, a deduction to the extent of the difference, and a further deduction of 1 degree is to be made, in calculating the proof quantities of all the flavouring essences and perfumed spirits in the consignment; but where the difference amounts to 5 degrees or more, the Board will specially determine the basis on which the calculation for drawback, &c., is to be made.

16. For example, two samples are taken, the strengths of which are declared to be 50 over proof and 8 under proof respectively, or an average of 21 over proof.

17. These are found by the hydrometer or by analysis to be 47 over proof and 98 under proof respectively, or an average of 18.6 over proof. The drawback would be payable on the basis of the declared strengths if the average found had been 19 over proof or more; but, since it is less than that declared by 2.4 degrees, a further deduction of 1 degree is to be made (in all 3.4 degrees) in calculating the proof quantities of all the flavouring essences or perfumed spirits in the consignment.

18. In arriving at the amount of drawback payable under these provisions, the bulk and proof gallons are to be calculated to centesimals, following the rule adopted as regards spirits bottled in warehouse.

19. An ordinary spirit certificate, showing the number of cases, the total bulk gallons, &c., must be sent with the goods to the ship's side, the original notice (Form III.—5) being in all cases sent at the same time to the collector of Customs at the port from which the goods are to be exported. The proper officer of Customs will certify thereon the shipment of the goods, and send it immediately to the Customs Statistical Office. It will then be returned without delay to the station whence the goods were removed.

20. When samples are sent to the laboratory, a copy of the notice (Form III.—5) must be sent thereto by first post.

21. This notice, with the analysis strength inserted therein, will be forwarded from the laboratory to the proper officer, or by the Board to the proper collector, as the case may be, in accordance with the instructions in the case of tinctures, in General Order of April 6 last.

22. The officer should note, on each notice, the address to which it should be returned.

23. An abstract of each consignment should be sent to the principal of the Statistical Department.

24. Bond, with surety, for the due exportation of the goods, must be given by the rectifier or compounder before removal. The bond may be a general one. A special form of bond (No. 294-1) has been provided for use under the regulations in this Order, and a supply can be obtained in the usual way.

25. On receipt of the Forms III.—5, examined by the supervisor, the collector will take steps for payment of the drawback without delay.

26. When flavouring essences or perfumed spirits are ex-

ported to the Isle of Man, the following course is to be adopted:—

27. When the strength has to be ascertained at the laboratory the officer must prepare a copy of the original notice for transmission to the collector of Customs at Douglas, and forward the original notice to the principal of the laboratory, who, after inserting therein the ascertained strengths, will forward it to the collector at Douglas, in order to enable him to charge the insular duty. Both notices will then be returned to the proper collector of Inland Revenue, for payment of drawback, &c.

28. If the strength be determined by the officer and found correct, only the original notice need be sent to the collector at Douglas.

29. In cases of extreme variation of strengths, whether found by the officer or at the laboratory, the notice will be sent to the collector at Douglas by the Board, when the basis for calculation of drawback has been fixed.

FLAVOURING ESSENCES.

30. With regard to these essences an allowance for waste of 4 per cent., is to be made upon those prepared by maceration or percolation, the same as in the case of tinctures; and upon those prepared chiefly by the addition of flavouring ingredients to the spirits, an allowance of 2 per cent.

31. The drawback of duty will be at the rate of 10s. 6d. per proof gallon, with the usual allowance of 4d. per gallon.

32. The sizes of the bottles will be restricted to $\frac{1}{2}$ oz., 1 oz., 2 oz., 4 oz., $\frac{1}{2}$ pint, 1 pint, 2 pints, and 4 pints.

33. A case may contain flavouring essences of different kinds, but all the bottles in the same case must be of the same size.

34. When the size of the bottles is not less than 5 oz., they must be packed in cases containing not less than 2 bulk gallons, and when the size of the bottles is not greater than 4 oz., they may be packed in cases containing not less than 1 gallon.

35. Schedule of flavouring essences in respect of which the special allowance of 4 per cent. for waste may be granted under the provisions of this General Order:—

Essence of celery.	Essence of tonquin.
" chocolate.	" vanilla.
" coffee.	" lemon, made
" ginger.	with spirits and lemon-peel.
" horehound.	Essence of orange, made
" orris.	with spirits and orange-
" tamarind.	peel.

PERFUMED SPIRITS.

36. An allowance of 4 per cent. for waste is to be made on perfumed spirits as prepared for sale (except upon certain articles hereinafter mentioned); but in order to become entitled to this allowance the exporter must make a declaration on Form III.—5, that the perfumed spirits have been made from pomade extracts, or from other macerated substances prepared in this country, and that they do not consist of any have not been manufactured from imported perfumed spirits.

37. The drawback of duty will be at the rate of 10s. 6d. per proof gallon, with the usual allowance of 4d. per gallon.

38. To meet the requirements of the trade the sizes may begin at $\frac{1}{4}$ oz., and increase by multiples of $\frac{1}{4}$ oz.; but the bottles in each internal package must be of uniform size and of the same strength, and must contain at least 3 oz.

39. The contents of the bottles are to be checked by taking not less than six of each size for ascertaining the average contents of the bottles of that size, and the total contents for drawback and allowance shall be calculated from such ascertained average, and not from the nominal capacities of the bottles.

40. No case is to weigh less than 42 lbs., after the same has been packed and made ready for exportation.

41. The regulations concerning perfumed spirits shall apply also, as far as applicable, to the following preparations; but the sizes of the bottles, except in the case of eau-de-Cologne, lavender-water, and Florida-water, shall begin with 1 oz. and increase by multiples thereof:—

Eau-de-Cologne.	Dentifrices.
Lavender-water.	Hair-washes.
Florida-water.	Brilliantines.
Toilet-vinegars and waters.	

42. The strength of these preparations must be ascertained by the hydrometer.

43. These preparations are not entitled to the allowance of 4 per cent. for waste; but the usual drawback of 10s. 6d. with the allowance of 4d. per proof gallon, will be paid.

By the Board,

ROBERT MICKS,
Secretary.

CHOLERA NOTES.

THEY DID NOT DIE OF CHOLERA.

Mr. Theo. H. Tismey, of Eastbourne, sends a remarkable letter to the *Pall Mall Gazette* in regard to the treatment of cholera. He states that a brother of his, who practised in Calcutta, used to "prescribe a 1-per-cent. solution of nitro-glycerine (a well-known Pharmacopœia drug), the patients taking a wineglassful every fifteen minutes until relieved; alternately he administered galvanic action with Helmholtz's battery. None of his patients thus treated died; on the contrary, recovery was almost as sudden as the seizure. He had several theories respecting this remedy. One, which he most favoured, was that the application of the galvanic action caused a slight explosion of the nitro-glycerine, effecting either the discharge from the alimentary canal of the cholera bacillus or its dislocation and dispersion into some other part of the system, where it was rendered innocuous." Considering that the dose of the pharmacopœial solution is from $\frac{1}{2}$ to 2 minims, the wineglassful dose of Mr. Tismey is pretty wide of the mark; but the ingenious and amusing theory regarding the combined action of the nitro-glycerine and the galvanic current is quite sufficient to put the remedy out of court.

ABOUT THE MICROBE.

Parisian scientists have of late been very attentive to the causation and prevention of cholera, and several papers on the subject have been communicated to the Academy of Sciences. M. Pasteur, in presenting a copy of Dr. Daremberg's book on the subject, strongly supported the author's protest against the pollution of the water-courses by drain-waters, and equally against the pollution of the soil by the distribution of these waters on land under cultivation. Daremberg thinks that the germs of cholera, in the form of the bacillus which produces it, can remain living and virulent in the soil for several years, and eventually lead to the spread of the disease. Thus the cholera in the environs of Paris would have originated in cholera-germs preserved since the last epidemic, in 1884. At the same meeting M. Ferran made some observations on a new chemical function of the comma-bacillus. The growth of this microbe is always rapid and luxurious in the ordinary culture-solutions; if they contain milk-sugar, it is incomparably more so; but the growth ceases entirely as soon as the solution becomes acid by the development of lactic acid, and the vitality of the microbe is extinguished. It seems reasonable to employ lactic acid in lemonade against cholera (as the Paris city authorities have suggested), and to aid its action by the anæsthetic power which morphine offers us; the alkaloid would, perhaps, hinder the absorption of the toxic substances, and would prolong the action of the lactic acid by opposing its rapid elimination.

PRECAUTIONS IN THE EAST-END.

At the usual fortnightly meeting of the Guardians of the parish of St. Matthew, Bethnal Green, held on Tuesday, August 30, a letter was read from the district medical officer asking for a conference with the Board, so that steps might be taken to combat any outbreak of cholera in the parish. The Board remitted the matter to the Dispensary Committee with powers to act; and this committee, with Mr. A. P. Barnard, chemist, as chairman, met in consultation with the medical officer on the Thursday following, and resolved, on the recommendation of the medical officers, to keep their dispensary open day and night for four weeks; that an extra dispenser should be obtained for night duty at a salary of 50s. per week, their permanent dispenser undertaking extra duty during that time. They gave their

dispenser instructions to take into stock, at the dispensary, extract of meat (Liebig and Valentine), brandy, and disinfectants. They also instructed their Clerk to communicate with the Asylums Board as to the removal of patients, and with the Vestry, as Sanitary Authority, concerning hospital accommodation.

GERMAN DRUGGISTS AND THE SUNDAY REST ACT.

The German Sunday Rest Act prohibits work of all kinds in shops or factories during the hours of Divine service. Certain Berlin wholesale drug-firms have just petitioned the chief of police to be allowed exemption from this clause during the cholera epidemic, giving as their reason that they were so overwhelmed with orders for disinfectants that they could not cope with them unless allowed special indulgence in the matter of working-hours. Their request has been refused.

RAILWAY GUARDS AS CHOLERA DOCTORS.

The Prussian Minister of Railways has issued an order to the railway administrations commanding them to keep every guard in charge of a passenger-train supplied with an ounce bottle of a mixture of landanum and ether, from which the guard is to administer 20 to 30 minim doses (preferably on a piece of sugar) to any passenger in his train who shows symptoms of cholera. The *Pharmaceutische Zeitung* wants to know how the guard is to know whether a passenger is suffering from cholera or from any other complaint, and protests against entrusting railway servants with the indiscriminate distribution of a drug the sale of which by pharmacists, except upon medical prescription, is severely prohibited.

PHARMACISTS AND THE EPIDEMIC IN HAMBURG.

According to a writer in the *Pharmaceutische Zeitung*, one of the results of the outbreak of cholera in Hamburg will be the introduction into the Reichstag of a Bill for placing the power to adopt protective measures against infectious diseases in the hands of a central authority, thereby taking away the autonomy now possessed by Hamburg and other free cities in this matter. The writer, after drawing a harrowing picture of the devastations of the plague in the ancient city, describes the preventive measures generally resorted to by pharmacists. A 5-per-cent. solution of carbolic acid is sprinkled on the floor of the pharmacies at frequent intervals, and near the desk for sales over the counter a basin with corrosive-sublimate solution (3 in 1,000) is kept for the frequent rinsing of the hands. No bottles are taken back from customers during the epidemic. Smoking and, as far as possible, all direct contact with customers are also avoided. The following prophylactic has been found very useful:—

Hydrochloric acid	30 grains
Pepsin	30 "
Aq. menth. pip.	6 oz.
Syr. zingiber.	1 "

Take half a tablespoonful every two hours.

Feet and legs should be rubbed morning and night with spirits of camphor.

No pharmacist has died of cholera in Hamburg thus far.

DISINFECTANTS IN GERMANY.

A RECENT commercial report of the *Pharmac. Zeitung* has the following:—"While in Russia, unaccountably enough, the slightly active 50-60-per-cent. crude carbolic acid has been officially prescribed for disinfecting purposes, the German law properly orders the employ of crude 100-per-cent. acid; and for this kind, which is already very scarce at present, a further strong demand is sure to manifest itself. That bleaching-powder should be assigned such an important place in the German order is astonishing, as it is notorious that this preparation is particularly one of which the disinfecting power is considerably affected by age and method of storage, and that it is difficult to gauge its efficacy. The advance in carbolic acid has been still greater than was foreseen, and this applies to crystals as well as to crude acid. For many years that drug was neglected to such a degree that neither manufacturer nor trader could make

any profit out of it; now it has suddenly risen 75 per cent. in value. Crystals can hardly be had for immediate delivery, and of crude acid only the low-percentage kinds are offered freely. Crude 100-per-cent. acid, which consists of the really active parts, nmixed with valueless tar oils, is scarce, and is kept by the manufacturers for conversion into 50-60-per-cent. crude acid—a variety of which immense quantities are being used in Russia. A further strong demand for 40-per-cent. crystallised and 100-per-cent. crude acid was certain to arise, for the latest reports from the stricken districts left no doubt of the extension of the plague and the great increase of fatal cases. There has been an important advance in corrosive sublimate, which is ordered in large quantities for disinfecting purposes in Russia and Germany. Manufacturers are unable to keep pace with this demand. Permanganate of potash, also demanded for disinfection, is likewise dearer. There has been a strong inquiry in Germany for peppermint herb, which has a great popular reputation as a prophylactic for stomach and bowel complaints. The harvest of the herb has been a good one in Germany, but in spite of this the price has risen, and every pharmacist's order to his wholesale house includes a request for the herb. Peppermint oil has advanced from the same cause."

Business Changes.

MR. HUES, Handsworth, has purchased the business at Malvern Wells, formerly owned by Mr. Wakefield of that place.

MR. A. H. ELLITHORNE, chemist, of York Place, Ball's Road, Birkenhead, has opened a branch pharmacy at 25 Wellington Road, Oxtou.

MR. SMITH, until lately assistant with Mr. Chase at Five Ways, Edgbaston, has succeeded to the business of Mr. Hnes, at Handsworth, Birmingham.

MR. BREWIS, who has managed the laboratory of Messrs. Boileau & Boyd, wholesale druggists, Dublin, for some years, has accepted an engagement with Messrs. Dakin & Co., of London.

MR. D. R. THOMAS, who has been the managing partner in the firm of Cousins, Thomas & Co., Oxford, for the last eight years, has just succeeded to the whole of this old-established business.

MR. THOMAS PARKIN has sold his business at Bolsover, Chesterfield, to Mr. Greaves, of Clowne, and has purchased from Mr. Holmes, of Ringwood, Hants, the business hitherto carried on by the last-named chemist.

MR. J. C. POTTAGE's homoeopathic business at 47 St. Vincent Street, Glasgow, will in future be in the hands of Mr. Thomas Robinson. The business has been in existence for thirty years, and during the last five years Mr. Robinson has been manager.

MR. FRANK DERRY, who has for the past three years acted as advertisement-manager to the Guy's Tonic Company, has left that firm to act in the same capacity for Mr. Roscoe C. Spurin, the proprietor of the new preparation for the teeth, "Dorothy Dentifrice." This preparation, which has had a good success in the West of England, is now brought to London, and, we believe, is to be pushed vigorously. It is sold in 3d. packets, and extremely attractive showcards are given with it.

HYOSCINE AND SCOPOLAMINE.—At a recent meeting of the Slesian Society for National Culture, Professor Ladenburg made a communication in regard to Schmidt's observations that hyoscine and scopolamine are identical bodies. He does not agree with that view, but admits that scopolamine is found in commercial hyoscine. He stated, further, that there is in scopolamine an alkaloid which has a very great resemblance to hyoscine, but it is not identical, for hyoscine is $C_{17}H_{23}NO_3$, and the alkaloid in question is $C_{17}H_{21}NO_3$.

Trade Notes.

THE Chemists' Association (Limited) (formerly Thompson, Walters, Hole & Co., Limited), Cartain Road, are now connected with the telephone, No. 11,391.

MESSRS. E. BREFFIT & CO. (LIMITED) have registered a design for a price-card for van-boxes, bin-cases, &c., the feature of which is that on the front page of the card is a drawing of a bin-case, the lid of which is made to open, showing inside (on the opposite card) the internal arrangement of the case.

BESIDES the prize to consumers offered by the Natural Food Company (Mr. Peter Tyrer), Long Lane, Borough, which we mentioned in a Trade Note last week, in connection with Dr. Allinson's Natural Food, the proprietor also offers a premium of 5% to the agent who sells the largest quantity to the public between August 1 and December 25, 1892. Particulars of this offer can be had from the company.

MESSRS. CONDY & MITCHELL (LIMITED) tell us that what they meant to convey to our representative at last week's interview was that they might be compelled to go to Germany for their bottles if, as they feared, the English makers were unable to keep up the supply. Thus far they have bought their bottles in England.

MR. JAMES TOWNSHEND, of Exeter, has his specimen almanacs for chemists ready. These include an illustrated "universal" almanac with good pictures and interesting reading-matter, a cunning little purse-almanac, and a novelty in the shape of a bouquet-almanac, produced with "gophered" gilded edges.

THE very effective picture of the Walachian girl with a pitcher of Franz Josef water, by Thnmann, which we illustrated in our Summer issue, and which Messrs. Hertz & Collingwood have adopted as a showcard, is now, we understand, ready for distribution to chemists who will exhibit it. It is a lithograph in twenty-three printings, and the firm tell us the original painting cost 1,500*l.* The colours are subdued, and the reproduction is perfectly accomplished.

BLAUD'S PILL IN TABLOIDS.—We have already mentioned the fact that Messrs. Burroughs, Wellcome & Co. have introduced a new tabloid, in which the ingredients of a 4-grain Bland's pill are combined without excipient, providing a cream-coloured mass. It is only this week that we have had the opportunity of examining them. The first thing that strikes one about these tabloids is their small size compared with the usual Bland's pill, but we have found that the average weight is between 4 and 4.1 grains—a commendable degree of accuracy, we should say. The colour of the tabloids is due to the fact that the alkaline carbonate and ferrous sulphate are prevented from reacting until a tabloid is brought into contact with water, when the characteristic pea-green ferrous carbonate is produced. In air-free water the carbonate formed is but slightly coloured, showing that the ferrous salt is remarkably free from oxidation. We have also noticed that by gentle friction the carbonate which is formed comes off, and immediately the white surface below begins to assume the green colour. Hence it may be expected that assimilation of the iron will proceed steadily, and without unduly neutralising the acid contents of the stomach.

NEW COMPANIES.

SCARBOROUGH CLIFTON STREET AERATED-WATER COMPANY (LIMITED)—Capital, 2,000*l.*, in 5*l.* shares. Objects: To purchase the Clifton Street aerated-water manufactory, and to carry on business as manufacturers of and dealers in all kinds of aerated and mineral waters, &c. The first subscribers are: G. T. Eaman, 8 St. Helen's Square, Scarborough (twelve shares); R. Cowton, St. Lawrence, The Valley, Scarborough (ten shares); G. Evesham, Castle Road, Scarborough (ten shares); J. Coulson, Castle Road, Scarborough (ten shares); H. Vipin, 12 Dean Street, Scarborough (two shares); D. Robinson, Scalby, Scarborough (ten shares); and J. Dales, Gristhorpe, Scarborough (two shares). There shall not be less

than two nor more than five directors, and the first are G. T. Eaman and G. Evesham. Qualification, 50*l.*; remuneration, 15*l.*, divisible. Office: 29 Westcrough, Scarborough.

BOROUGH MINERAL-WATER MANUFACTURING COMPANY (LIMITED).—Capital, 5,000*l.* in 2*l.* 10*s.* shares. Object: To adopt and carry into effect an agreement made between H. W. Clegg of the one part and J. W. Brown, on behalf of this company, of the other part, and generally to carry on the business indicated by the title. The first subscribers (who take ten shares each), are: J. W. Brown, Rawtenstall, innkeeper; H. W. Clegg, Waterfoot, mineral-water manufacturer; J. H. Edmondson, Waterfoot, innkeeper; W. Dear-den, Haslingden, innkeeper; J. Holt, Lumb Benchurch, innkeeper; D. Ashworth, Waterfoot, innkeeper; and G. E. Hargreaves, Haslingden, innkeeper. There shall not be less than five nor more than seven directors; the first to be elected at the first general meeting. Qualification, 25*l.* Remuneration, 7*s.* 6*d.* each for each board attendance. Registered office: The Works, Carr Lane, Waterfoot, Lancashire.

Personalities.

THE engraved portrait of Dr. Thorne Thorne, which we published last week, was from a photograph by Messrs. Fradelle & Young.

MR. ALFRED HUGHES CLAYPOLE, pharmaceutical chemist, York Town, has been elected a member of Frimley School Board. He was third on the list, and received 424 votes.

THE Chairman of Directors of the Ashburton Drug Company (Limited), Ashburton, Canterbury, New Zealand, is now in London. His address is H. Friedlander, 60 Fenchurch Street.

THE RIGHT HON. T. H. HUXLEY resents a statement by *Nature* that he was allowed to leave the public service "without the slightest recognition" by the State. He feels "bound, in justice both to Lord Salisbury's and to Mr. Gladstone's former Governments, to point out that it is incorrect." Very substantial recognition was awarded him by both; and the late Lord Idlesleigh, in offering to recommend him for a Civil List pension, expressly put it as an honour.

A DERBYSHIRE paper gives some particulars of Mr. Pochin, the chairman of the Sheepbridge Coal and Iron Company, a director of the Staveley Coal and Iron Company, of the M. S. and L. Railway Company, and of other concerns. Mr. Pochin commenced business in a small way as a chemist in Manchester, and has prospered and grown wealthy. Some years ago he purchased the estate of Bodnant, on which he has spent large sums, and now it is one of the largest, best-managed, and most charming estates in Wales. Trees have been planted in hundreds of thousands. On a commanding knoll, almost enshrouded in trees, Mr. Pochin has spent 10,000*l.* on a mansoleum externally built of cream-coloured stone, in the Classical style, and internally constructed of the choicest marble, in different colours, interspersed with precious stones.

MARRIAGES

BRETT—NICHOLLS.—On September 3, at Holy Trinity Church, East Finchley, Mr. Samuel Brett, of THE CHEMIST AND DRUGGIST staff, and for some time the resident agent for that journal in New York, to Miss Millie Nicholls, of East Finchley.

TATE—CRAIG.—On August 31, by special licence, at Glenmount, Whitehouse, James Tate, M.P.S.I., Belfast, to Helen (Ellie), seventh daughter of the late Hugh Craig, Belfast.

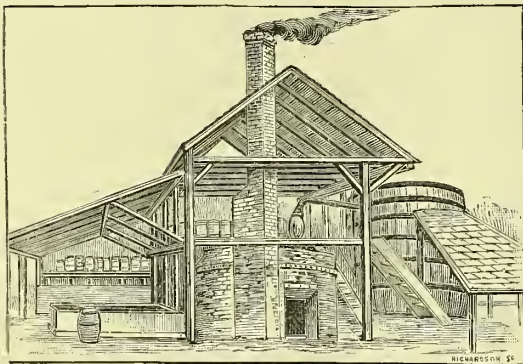
DEATHS.

HILL.—On August 13, Alfred Hill, chemist and druggist, Norwich. Aged 70.

TAYLOR.—On August 9, Thomas Taylor, chemist and druggist, Bristol. Aged 90.

A MISSISSIPPI TURPENTINERY.

FORMERLY most of the turpentine shipped from the United States came from North Carolina, but the forests in that State are now well-nigh bled and burned to death, and the turpentine industry has found a new home in Mississippi, where the town of Parvis has become one of its chief strongholds. Many visitors go down to Parvis to spend a holiday in its balsamic pine-woods; and from the accounts of a visit to one of the principal distilleries, recently given



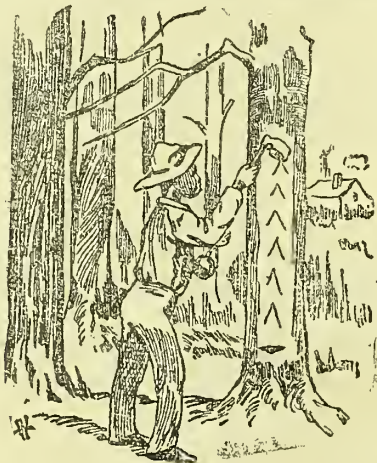
THE DISTILLERY.

by one of these holiday-makers in an American journal, we glean the following particulars:—The turpentine orchards, as the forest plots whence the resin is obtained are called, vary considerably in size, but those of any magnitude contain from 10,000 to 15,000 acres. These are divided into "crops," consisting of 160 acres of land each, or about 10,500 turpentine "boxes."

BOXING AND SCARIFYING.

The first step in opening up an orchard is the cutting of boxes, which is begun about the middle of December, and each year afterwards new boxes are cut on new timber. These boxes are made by taking a slice out of the tree near the ground, leaving a pocket-like opening. Later on, another set of axemen come and cut a small chip out of each corner of the box in order to give it roundness and enable it to hold the flowing sap. This process is called "cornering boxes." The cornered boxes measure 14 inches wide, 7 inches deep, and 4 inches across. Generally only one box is cut to a tree, but if the tree is large more are put on.

About the middle of March, when the weather is warm



SCARIFYING THE TREES.

enough to cause the sap to flow, the "chippers" are sent out. To each man is assigned a crop of boxes, which he is expected to chip over once a week. Commencing from the

edge and centre of the box, the tree is scarified in V-shape abrasures, with an instrument called a "hacker," which is an open, semi-circular piece of sharpened steel attached to a short handle. On the end of this is fastened an iron ball which gives impetus to the stroke made by the workman. Once a week one of these "streaks" as they are called, must be put on each side of the centre line of the box on the side of the tree, in order to keep the sap constantly flowing. At each new streak is put on, the arch mounts higher and higher, and in two or three years it reaches such an altitude that the tree has to be abandoned.

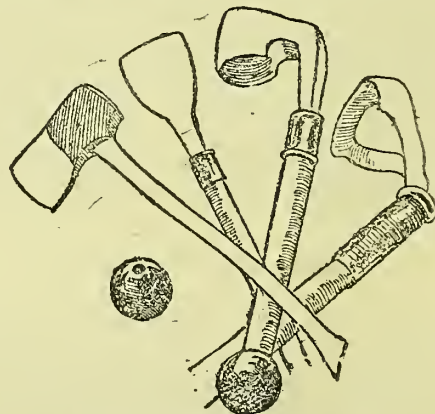
Formerly, when turpentine was higher in price, the tree was scarified to a much greater height than now, the workmen mounting ladders in order to reach the desired altitude. The trees do not lose their vitality by being scarified for turpentine. The process does not even injure their usefulness for lumber. The tree which has been used for turpentine once, however, cannot again be tapped until after an interval of fifteen or twenty years.

COLLECTING THE TURPENTINE.

When the fourth streak is put on the tree, which is four weeks after the chipping commences, sufficient "crude," or sap, has run into the box to enable the "dippers" to start to work. "Dipping" can be done by women and children. Sometimes whole families work together, being given as many crops to dip out as they can undertake. The instrument by which the dipping is effected is a flat, heart-shaped piece of steel, attached to a long handle. The workman places this paddle into the box, and with a peculiar twist of the wrist brings out the contents, which he places into a bucket. The full buckets are emptied into the barrels, which hold 480 lbs. of "crude" each. The still runs from one to three charges per day, requiring eighteen barrels of "crude" to the charge. From each charge is distilled from two and a half to three and a half barrels of spirits of turpentine according to the newness of the trees. The balance consists of resin and chips. The first year's bleeding of the tree yields what is called "virgin dip," which contains a large percentage of turpentine than the dip of any succeeding year. The resin which is made from this is also of a fine quality. As each year passes, the percentage of turpentine and the quality of resin deteriorate.

THE DISTILLING.

In the fall of the year the accumulation on the side of the tree is scraped off and distilled, but it yields a small percentage of spirit and a poor resin. The distillery itself is an exceedingly simple structure, its main features being a brick-built furnace with a tall chimney, and a rather clumsy copper still communicating, by means of a still-head and worm, with a big cooling-vat and container. Over the furnace, and near the head of the still, is a platform con-



BOXING, HACKING, AND DIPPING TOOLS.

taining several barrels of a white, paste-like substance—the crude turpentine as it flows from the trees, and which requires distilling in order to separate the essential oil of spirits of turpentine from the rosin. About eighteen barrels of crude turpentine go to a charge, which is boiled for four

hours. The stillman, by putting his ear to the side of the pipe whence the steam issues from the cooling-vat, can judge whether the brew is progressing favourably. Great care has to be taken in keeping the fire at the right heat, and in keeping a sufficient quantity of water in the still, as the resin, if scorched, becomes valueless. The "low-wine," or water of distillation, which is exceedingly bitter, is highly esteemed locally as a consumption-remedy.

TURPS AND RESIN.

The discharge-pipe empties into a barrel, which, by means of a short wooden pipe, connects with a second similar receptacle. From this second barrel the turpentine is finally drawn into a third, which is rolled into the store-shed, and is in its turn emptied into the tank which conveys the spirits along a line of rail, passing underneath the platform to the nearest market. The liquid as it flows from the still into the first barrel is divided into a thick, yellowish, turbid and frothy part, filling about two-thirds of the barrel, and the "low-wine," which sinks to the bottom. The latter is drawn off by a tap at the bottom of the barrel, while the remainder, minus the froth, passes into the second barrel in a clean, warm, pungent stream. When all the volatile oil is drawn off the charge is allowed to cool for a couple of hours. The cap is then removed from the mouth of the boiler, and one of the hands, taking up a wire net with a long handle attached, runs it several times into the orifice, bringing it round with a sweeping motion, and hauling up quantities of straw and chips, which are dumped on the ground. The still man then descends the platform, and unscrews a cap on the side of the furnace, just over the resin vat. From this opening there comes rushing out a boiling hot, ruby-coloured stream, which changes to amber as its sprays scatter to right and left. This pours into a wire strainer set to receive it, under which is another strainer covered with cotton batting, and when it has penetrated these two it drips into the vat underneath, set partly in the ground.

The resin has to remain in this vat several hours for final cooling before being placed into the barrels, which it otherwise would burst.

LEAVES FROM A RECIPE-BOOK.

ANOTHER subscriber has very kindly placed at our disposal several recipe-books which have been compiled by his father and himself. In the books we have met with many CHEMIST AND DRUGGIST formulæ which have been tried and not found wanting, while the following have not, as far as we can recollect, yet appeared in these columns. The selection is of a somewhat miscellaneous character; but it is all the better for that. This is an instalment.

Pot Pourri.

Rad. calam. arom.	3ij.
Fol. rosæ	3ss.
Flor. lavand.	3ss.
Caryoph. contus.	3ss.
Sem. coriand.	3ss.
Moschi	gr. x.
Ambergris	gr. iv.

M.

Pott's Cerate.

Pulv. litharg.	3xvj.
Sapon. Cast.	3ij.
Aceti albi	3xxxij.

Dissolve, and evaporate the vinegar; then add to the following, previously melted:—

Ceræ flavæ	3x.
Ol. olivæ sec.	3xvj.

Mix well.

Odor Delectabilis.

Aq. flor. aurant. conc.	3iv.
„ rosæ conc.	3iv.
Ol. lavand. Ang.	3j.
„ caryoph.	3j.
„ bergamot.	3ij.
Moschi	gr. ij.
Sp. vin. rect.	3xx.

M.

Ol. Odoriferum.

Ol. origani	3j.
„ caryoph.	3j.
„ lavand.	3j.
„ citron.	3iv.
„ amygd. amar.	3ij.
„ cassiæ	3iv.
„ limonis	3iv.
„ jasmin.	3j.
„ bergam.	3iv.

M.

Honey Paste.

Ol. amygd. dulc.	3ij.
Cetacei	3ij.
Mellis	3i.
Otto rosæ	gtt. xv.
Ol. lavand.	gtt. vij.

M.

Linim Succini.

Camphoræ	3ij.
Ol. caryoph.	3j.
„ succin. rect.	3ij.
„ olivæ opt.	3xx.
Liq. ammon. fort.	3iss.
Aquæ	3xv.

Digest the camphor in the essential oils until dissolved, then add the olive oil, shake well, add the ammonia, and, lastly, the water, shaking well together.

This makes a unique cream-coloured "white liniment," which is of special value as an embrocation for whooping-cough and chest-complaints generally, while it also makes a good "rubbing-bottle" for sprains, rheumatism, and the like. If properly made it never separates, and is of the consistence of cream. Those who have not so far made a liniment a speciality should try this one.

Essence of Anchovies.

Pound 1 lb. of anchovies in a mortar; put them into a pipkin with 4 oz. of the best vinegar, and boil for a few minutes; then pulp through a hair sieve. To the portion that passes through the sieve add 2 oz. of salt, the same quantity of flour, and sufficient water to give it the proper consistence. Boil them together for a few minutes, and colour the mixture with annatto. A little cayenne pepper is sometimes added.

Chutney Sauce.

Stoned raisins	3iv.
Sour or crab apples	3vij.
Brown sugar	3iv.
Powdered ginger	3ij.
Common salt	3ij.
Cayenne pepper	3ij.
Garlic	3j.
Vinegar	a sufficiency.

Pound the solid ingredients together in a mortar until the whole is reduced to a pulpy mass, then add enough vinegar to bring the whole to the consistence of cream, and bottle for use.

Aquæ Mellis.

(1)

Ol. bergam.	3iss.
„ limonis	3j.
„ lavand.	gtt. xlv.
„ caryoph.	gtt. xlv.
Spt. vin. rect.	3vij.
Tr. iridis	3iv.
Aq. flor. aurant.	3iv.

M.

(2)

Gum. benzoin.	3xvj.
Storacis calam.	3iv.
Caryophylli	3vij.
Calami arom.	3xij.
Cort. aurant.	3xij.
Sem. coriand.	3xij.
Rad. iridis	3vij.
Fatæ Tonkæ.	3ij.
Spt. vin. rect.	O vj.
Aq. flor. aurant.	O ij.
Aq. rosæ	O ij.

Macerate for forty days, and filter.

FRENCH, GERMAN, AND ENGLISH ASSISTANTS.

BY A CONTINENTAL PHARMACIST.

HAVING had for many years in my employment pharmaceutical representatives of the three nations named above, I have had good opportunities of judging their respective characters and abilities. Although "comparisons are odious," it is sometimes interesting to consider the points of difference between men of different nationalities, engaged in the same occupation, and to observe the characteristically different ways in which they will set about the performance of similar duties.

PHARMACIEN.

Amongst French assistants we have two classes—namely, first, men who, after remaining three years as apprentices in purely French pharmacies, seek situations in Paris, or in some first-class English establishment on the Riviera, previous to preparing for the examinations, which will occupy three years of student life; and, second, men who have no intention of going into business on their own account, and no ambition to secure a diploma which would better their position even as assistants.

The former will not generally engage themselves for any lengthened period, whilst the latter are always on the lookout for permanent situations. From an employer's point of view, the assistant of the second category is generally the more valuable, as he usually gives more attention to the ordinary routine of a business than his more ambitious *confrère* would care to do.

French assistants, like those of every other nation, are largely influenced by the men with whom they have been apprenticed. *Malheureusement*, the greater number of apprentices commence their career in some little pharmacy where the greater part of their time is employed in handing over the counter 2 sons' worth of flowers for tisane, or in retailing chloride of lime (*poudre de javelle*), or quillaia-bark (*bois de Panama*).

The odour predominant in a French pharmacy is invariably that of *chlore*. This chemical is largely used by our *blanchisseuses* to whiten the linen, which it soon destroys. Having had no experience in dispensing, or in the ordinary duties required in a first-class pharmacy, they have a second apprenticeship to undergo on leaving their first situations.

I might mention that indentures are not drawn up in France as in England. An engagement is sometimes made by the two parties on *papier timbré*, but this arrangement is far from satisfactory, and, consequently, is not often employed. A verbal agreement is adopted more frequently than a written engagement. It results from this lax method of binding an apprentice that after remaining one year with his first master, he often leaves him to go elsewhere, when he expects to earn a small salary as improver. Some of these youths, when properly trained, are excessively quick at learning, and are also good at retaining the information they acquire. I refer especially to southerners.

One interesting characteristic (not the least important) of French assistants is their invariable good temper, and desire to live in harmony with those with whom they are surrounded, irrespective of national prejudices or differences in opinion in political or religious views. They are quick-tempered, and resent immediately any attempt at bullying; but they are equally quick in forgiving an injury, and I have never yet met with a sulky French assistant. He is superior to the average English or German assistant in some branches of the profession. He makes better syrups, turns out cachets quicker and more elegant in appearance, and is more attentive to the filling-up of shop-bottles, drawers, &c. Unless he has had some experience in a cosmopolitan pharmacy, he cannot undertake to dispense prescriptions written in Latin. French prescriptions are written in the language of the country. Some French assistants are exceedingly good salesmen, although many consider it *infra dig.* to attempt to sell anything to a customer which he does not actually ask for.

APOTHEKER.

Within twenty-four hours after his arrival the German assistant has mapped out in his mind's eye a better position for

every individual bottle and pot which adorns the pharmacy, and unless his employer keep a strict look-out, he (the employer) will be unable in a day or two to find any article in its original place. If permitted to reorganise the pharmacy, he goes systematically to work, but his labours are not usually crowned with the success which one expects as the result of so much time and energy being spent on the attempt.

His ideas are practically useless. If you do not chance to fall in with his plans and suggestions, he invariably turns crusty and sulks for an indefinite time. Unlike his French or English *confrère*, he is never willing to admit a fault or acknowledge himself in the wrong, however clear may be the proof. At the dispensing-counter he is at his best, but he is utterly useless as a salesman. It is sometimes painful to notice the length of time he requires to reply to a customer, even when the client is one of his own countrymen. He appears and acts in the pharmacy as though his sole occupation consisted in dispensing, and looks cross when called upon to perform any other duty. He reads Latin with greater facility than either his English or French comrades, and is usually master of one or two languages besides German.

Usually good at making emulsions; divides powders quickly and accurately; makes pills quickly, but rarely succeeds in giving them the spherical form which is essential to their elegance. His productions in this branch of pharmacy are apt to look as though they had been pinched out of the mass, gnimauve or liquorice-powder being freely added to fill up the interstices. He is never at a loss to replace any drug which happens to be out of stock by another "equally good"; has not the remotest idea how to wrap a bottle or any kind of parcel.

Before leaving his situation he invariably provides himself with specimens of every label and wrapper in the pharmacy, and after making himself generally disagreeable for the space of six months to all around him, starts off for home without wishing either the principal or his fellow-assistants goodbye. Most humble in his correspondence when seeking a situation, and most arrogant when he thinks he shall require no further favour.

CHEMIST AND DRUGGIST.

If a qualified man, and has lived a year or two in a good West-end establishment, the English assistant can compare favourably with either of the before-mentioned. He soon makes himself at home either at the front counter or behind the scenes. Generally speaking, he is very conscientious and accurate in his work. He is good at preparing mixtures, ointments, and pills. The last he turns out well, and silvers or coats to perfection. With emulsions he is not generally so successful; he soon, however, perfects himself after a few lessons. Unfortunately a bit too conservative in his ideas, he probably strongly objects to using a card to clean out a mortar, although it may often replace a spatula for that purpose to perfection.

Persists in folding powders à l'Anglaise, although the method adopted by continental chemists is far better. Dislikes to be called away from his work to serve a customer, although he may know that his services cannot be dispensed with. He rarely knows any other language besides his own, and is somewhat indifferent about attempting to master the language of the country in which he takes up his temporary residence. One of the correspondents of THE CHEMIST AND DRUGGIST, since gone over to the majority, argued that German assistants were superior to their English *confrères*; my experience, as well as that of many of my friends who employ both, is quite to the contrary, consequently we always offer a higher salary to the latter.

Some of your readers may think that I am slightly prejudiced in my comments on the German assistant. I am not so, however, and have given my views after careful consideration and minute inspection of the individual merits of the parties referred to.

A "MODEL of the figure of Lot's wife in salt" will appear in the Kansas Court of the Chicago World's Fair to represent the salt industry of the state, which, we infer from this emblem, has come to a sudden stop, and is not likely to progress much in future.

Legal Reports.

SALT IN BEER.

SEVERAL publicans were prosecuted at Bridgend Police Court on Saturday last, under the Sale of Food and Drugs Act, for selling beer to which, it was alleged, salt had been added to the prejudice of the purchaser. In the case contested, Dr. William Morgan, the county analyst, had certified that the beer contained chlorides equivalent to 62 grains of common salt per gallon. Dr. Morgan was called by the defendant's counsel, and was closely examined as to his analysis. He admitted that having found the quantity of chlorides present in the beer, he had assumed them to represent chloride of sodium exclusively. If there were other chlorides, so much the worse for the beer. He said there was a general understanding that the limit of chloride of sodium allowable in beer was 50 grains to the gallon. Dr. Attfield, who was called for the defence, said the certificate was incomplete because the chlorides were lumped together. In his opinion the certificate was useless for the purposes of the Act. The unqualified words "chlorides equivalent to 62 grains of common salt" were liable to mislead non-chemical readers, who believed—erroneously, doubtless—that common salt was added to beer to make the consumer more thirsty, and, therefore, the allusion was liable to prejudice the accused. He (Dr. Attfield) had found 17 grains of salt per gallon in the beer, 29 grains of chloride of potassium, and 28½ grains of chloride of calcium. It would require hundreds of grains of salt per gallon of beer to cause the consumers to be thirsty. There was no recognised standard. When salt was not present in the water used for brewing, naturally it was far better for a brewer to take pure water and put in salt than to take an impure water containing salt, which, for anything he may know, may be derived from sewage. All the summonses were dismissed.

TAKING OVER THE SYPHONS.

AT the Edmonton County Court last week, before Judge Abdy, Mrs. Dunn, a widow, now living at 73 Osnaburgh Street, Regent's Park, sued Mr Douglas, a chemist at Commerce Road, Wood Green, for 4*l.* 16*s.* due on an I.O.U. The plaintiff, acting as the executrix of the estate of her late husband, sold to the defendant for 95*l.* a chemist's business. There was a number of siphons which the defendant agreed to purchase at 2*s.* each, and it was in respect of these siphons that he gave the I.O.U. upon which he was sued. The defence was that the siphons were part of the stock-in-trade, and were included in the purchase which he made for 95*l.* The defendant said he was foolish to sign the I.O.U. The Judge told him he must pay the penalty of his folly. Verdict for the plaintiff, with costs.

BANKRUPTCY REPORTS.

Re JOSEPH NORMAN WISE, Claypath, Durham, Pharmaceutical Chemist.

AT the Durham Bankruptcy Court, on Tuesday of last week, Joseph Norman Wise, chemist and druggist, of Claypath, Durham, and residing in Gilesgate, came up for his first public examination. The following is the debtor's statement of affairs:—Liabilities: Unsecured creditors, 923*l.* 13*s.* 7*d.*; creditors partly secured, 300*l.*, less estimated value, 25*l.*—275*l.*; creditors for rent, &c., 25*l.*; making gross liabilities, 1,248*l.* 13*s.* 7*d.*, and expected to rank for dividend, 1,198*l.* 13*s.* 7*d.* Estimated assets: Cash deposited with solicitor for cost of petition, 12*l.*; stock-in-trade (cost 300*l.*), 250*l.*; trade fixtures, 50*l.*; furniture, 50*l.*; share in Chemists' Aerated-water Association, 1*l.*; book debts (good), 89*l.* 3*s.* 9*d.*; book debts (doubtful), 4*l.* 15*s.* 8*d.*; book debts (bad), 9*l.* 8*s.* 4*d.*; expected to realise, 91*l.* 8*s.* 8*d.*; total assets, 454*l.* 8*s.* 9*d.*, less 25*l.* for distrainable rent, and preferential rates, taxes, wages, sheriff's charges, &c.—429*s.* 8*s.* 9*d.*, which leaves a deficiency of 769*l.* 4*s.* 10*d.* The debtor alleges that his

causes of failure are want of capital, expenses being in excess of profit, and a long illness of himself. The Official Receiver reports that the debtor filed his own petition. He commenced business in May of 1883, with a capital of between 700*l.* and 800*l.* He had kept a cash-book, debtors' and creditors' ledgers, bank-book, day-book, and returns-book. All were posted to date except the bank-book. His banking account had been closed since about June, 1891. He had not within the last twelve months incurred any losses other than those in trade, nor pledged or disposed of any property. He had paid sums on account of trade debts up to the time of filing, and had not discontinued business. He had no capital three years ago, and though he had stock to the value of about 600*l.*, he was then insolvent, as he first became aware that he had not sufficient property to pay all his debts in full when he borrowed 300*l.* from his mother in November, 1888. He had contracted all his present debts since then, but expected to be able to pay them out of the profits of the business. His income for the last three years had been about 100*l.* a year, and his household and personal expenses about 180*l.* a year. The whole of the unsecured liabilities seem to be ordinary trade debts. He seemed to have over-valued his stock-in-trade, fixtures, &c., and as the Official Receiver does not think the assets will, if sold by auction, realise more than 300*l.*, he has obtained an order for the summary administration of the estate. According to the deficiency account delivered, debtor's failure seems to have been partly attributable to his living beyond his income.

In answer to the questions of the Official Receiver, the debtor said that his business comprised two sections—a retail shop and a wholesale trade. In 1888 he found that the wholesale business was not paying, and he gave it up. He had never made an assignment or composition before the present instance. Mrs. Wise, debtor's mother, was entered as a partly-secured creditor for 300*l.*, the security amounting to 25*l.*, but she did not intend to prove the debt until all the creditors were paid in full. He did not think he had over-valued the stock-in-trade and fixtures at 300*l.* He did not call his creditors together earlier on account of bad health during last year. At the time he borrowed the 300*l.* from his mother in 1888 he made out that he was 450*l.* to the bad. He borrowed 100*l.* last year from his mother and 20*l.* in the present year. He put all the money into the business. At the time he borrowed the money he submitted a statement of his affairs.

The Official Receiver said that with regard to the deficiency account which had been furnished him, some of the figures were incorrect. He asked debtor to examine it, and supply him with an amended account before the next sitting. He also asked debtor if he had any further explanation to offer as to why his assets did not reach 10*s.* in the pound.

In reply, debtor stated he did not think he had any more to say except that he thought he would manage to pull through; but that was evidently a mistake. He acknowledged that he had contracted debts without having reasonable hope of paying them.

The examination was then adjourned.

Re NORTHCOTT & SONS, Rood Lane, Drug-brokers.

IN the London Bankruptcy Court on Wednesday, on the application of Messrs. Barlow & James, a receiving order was made against the estate of F. Northcott, drug-broker, 13 Rood Lane, trading as Northcott & Sons. The liabilities are stated at 2,300*l.*, and the assets at 102*l.*

ABSORBENT COTTON.—One of the forms of cotton industry that is rapidly developing in the United States is the manufacture of absorbent cotton for surgical purposes. The business is receiving attention from some large mills and it offers opportunity for considerable profits, says the *Textile Record*. The raw cotton is boiled in a solution of potash until all the waxy and greasy material contained in the fibre has been extracted. It is then placed in a whizzer and dried, after which it is put upon the card and run out into laps.

CHOLERA.

THE SANITAS CO. (LIM.) beg to give notice that they have been entrusted with large orders from the Local Health Authorities at most of our Seaport Towns, and orders are crowding in from all parts of the country. They have made arrangements, however, to deliver promptly, and will not raise their prices.

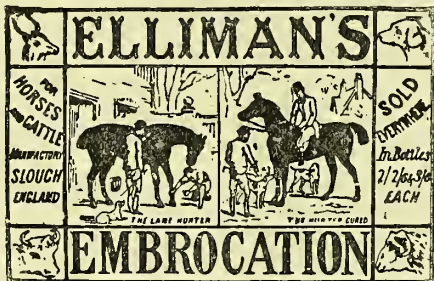
The "Sanitas Disinfectants and Appliances" are the best preventive agents against Cholera, and

"SANITAS DISINFECTING FLUID"

is the only Disinfectant that can be taken internally. It kills all disease-germs, but is non-poisonous to man.

THE SANITAS CO. (LIM.), BETHNAL GREEN, LONDON, E.

SHOW CARDS, 24×17 or 17×12,
Free to any address in the United Kingdom.

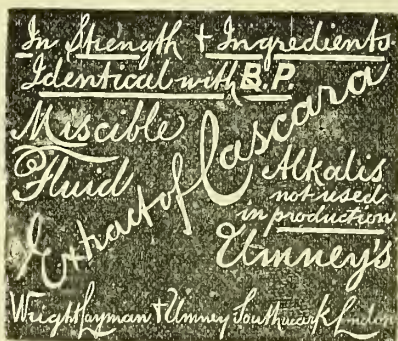


See first page, facing inside of front of cover, of first issue of this month, for latest particulars.

YOU CAN'T READ THIS WITHOUT YOUR SPECTACLES!

Day's Oil of the Night
Is an Embrocative Balm for the People, and a source of profit to the Retailer
1s. 1½d. and 2s. 9d. NO CUTTING.

DAY & SONS, CREWE.



SILICATED CARBON FILTERS



PATENT SELF-AERATING
MOVEABLE BLOCKS

WORKS, BATTERSEA LONDON. S.W.



MEDICAL ELECTRICITY.



EVERY DESCRIPTION OF
Galvanic, Faradaic, and Electro-Magnetic
Machines and Electrodes, Galvano-Cautery and
Lighting Instruments.

Lists Free. Descriptive Catalogue, 100 Illustrations,
32 pages, 4 stamps.

GENT & CO., LEICESTER.

LONDON AND LANCASHIRE FIRE INSURANCE COMPANY.

Head Offices 45 DALE STREET, LIVERPOOL.
74 KING WILLIAM STREET, LONDON.
West-end Branch: 26 PALL MALL, S.W.

Annual Income ... £801,000.
Funds in Hand ... £1,026,000.

Premiums Moderate. Losses settled with promptitude
and liberality.

Applications for Agencies specially invited from Chemists
and Druggists in both Town and Country Districts.

CHASSAING & CO'S PEPSIN, PEPTONE, PANCREATINE
8 Avenue Victoria, PARIS.
Sole Agents for the United Kingdom, Furst Brothers, 17 Philpot Lane, London, E.C.
(See Advert., Fourth No. of this Journal each month.)

THE BEST TINCTURES, INFUSIONS, AND SYRUPS ARE THOSE MADE WITH

Fletcher's
Concentrated Liquors

Editorial Comments.

THE PERFUME DRAWBACK.

AFTER many months of suspense the question of a drawback-allowance on alcoholic perfumes and flavouring-essences has been settled by the issue of the General Order of the Inland Revenue Department, which we print in another part of this issue. The Order concedes all, or nearly all, the demands of the trade, and, though a few irreconcilables may remain, the great majority of firms connected with the industries to which the Order relates will accept it as a fair solution of their difficulties until the time when the question of free alcohol for all industrial purposes shall have been brought within the domain of practical politics.

It will be remembered that the perfume-drawback question became a matter of public controversy in the autumn of last year, when the Inland Revenue announced their intention to do away with the anomalous privileges enjoyed by a half-dozen or so of the large London perfumers who had been fortunate enough to secure manufacturing space in one of the two or three public buildings recognised as bonded warehouses. The announcement that they were to be put on a level with all their less-favoured colleagues caused the privileged traders to join together for the defence of their monopoly, and it was not until several more or less stormy meetings had been held, and it was found that the Somerset House authorities were not to be nobbled, that a kind of understanding was patched up between the various interests involved and a committee appointed, fairly representative of both sections of the trade, to confer with the Inland Revenue officials upon the details of the new arrangement.

The new Order, it will be seen, makes no reference whatever to the privileged manufacturers. They will be allowed, we take it, to continue their manufacture at their present bonded warehouses, and upon the old terms, if they choose; but for the rest any licensed rectifier or compounder, no matter in what part of the country his works may be situated, can claim drawback under the terms of the new Order by giving twelve hours' notice on a special form to the nearest officer of the Department. The provisions for the sampling and testing of the goods are laid down with the utmost liberality to the exporters, and generally follow the lines of the previous Order concerning the drawback on medicinal tinctures. Where they differ it is mostly on the side of greater generosity to the perfumers. The minimum quantity of goods allowed for export in a single shipment under the terms of the Order is 2 bulk gallons, or about 17 lbs., net weight, which is even less than the quantity (56 lbs., gross) first suggested by the Somerset House officials and accepted as reasonable by the meeting of the trade at the London Chamber of Commerce on January 29 last. With regard to the drawing of samples, too, every reasonable concession is made. In the case of perfumed spirit the officer will test the strength of the spirit to be exported on the spot, and, where the test is found to correspond fairly with the exporter's statements he will return the samples into the bulk without more trouble, so that there need not be any waste or loss to speak of. This is not the case, however, with flavouring-essences, the samples of which must be sent to Somerset House for analysis—the intention of the exception being clearly to prevent the possibility of any employment of methylated spirit in this manufacture. There is no proviso in the Order with regard to the refunding by the Revenue of the money value of samples used for testing. It would hardly be fair to expect the authorities to pay for the samples they require, and the matter is one of very little importance, but it may be remembered that some of the more exacting representatives of the trade at the Chamber of Commerce gatherings distinctly formulated the demand. An abstract of each consignment, we observe, must be sent to the Principal of the Statistical Department, and we may therefore hope, in the course of a year or so, to be able to judge with exactness of the benefits that have accrued to our commerce from the new concessions. Besides the ordinary drawback of 10s. 6d. per proof gallon, plus the "usual allowance" of 4d. per gallon (which is a kind of bounty to our manufacturing industry), a waste allowance of 4 per cent. will be made upon flavouring-essences prepared by maceration or percolation, and upon perfumed spirits, as is now done upon medicinal spirituous tinctures. But, as with the latter, so there are certain exceptions in the new Order. Flavouring-essences, prepared chiefly by the simple addition of flavouring-ingredients to

alcohol, for instance, are only to be given an allowance of 2 per cent.; and eau-de-Cologne, lavender and Florida waters, toilet vinegars and waters, dentifrices, hair-washes and brillianines made with alcohol, are not to receive any waste allowance whatever.

By the new Order all our perfumers are placed upon terms no less favourable than their French colleagues, and, so far as we are able to judge, rather better than their fellow-manufacturers in Germany. They should, therefore, be able to do something more than hold their own in the markets of the world.

ACETUM SCILLÆ.

A few weeks ago a correspondent sent us a query in regard to acetum scillæ, which appeared of sufficient interest to bring to the notice of those who happened to be making the preparation at the time. We now have enough responses before us to provide a definite reply to the query, which, in effect, was, What should be the measure of acetum, or does the Pharmacopœia expect a pint to be produced? As the Pharmacopœia process is one of simple maceration of 2½ oz. of bruised squill in a pint of dilute acetic acid, it is plain that the filtered product after seven days' maceration will fairly represent the activity of the drug, and that the degree of expression to which the marc is subjected will slightly influence the specific gravity of the product. In properly-conducted maceration processes expression of the marc is an economical procedure, and does not add to the strength of the preparation, since the liquid in the marc is of the same strength, or nearly so, as that outside it. This statement is supported by results submitted by our correspondents based on manufactured quantities varying from 3 pints to 4 gallons. Reducing these to the pint standard, we obtain the following figures:—

No. 1.	Volume of the product	18.3	oz.	..	sp. gr.	1.038
No. 2.	"	15.75	"	..	"	1.038
No. 3.	"	13.3	"	..	"	1.039
No. 4.	"	18.2	"	..	"	1.040
No. 5.	"	18.8	"	..	"	1.041

In other replies the writers do not give the volume of the product, and one of these states that he finds its "specific gravity vary from 1.037 to 1.053." Another, who obtained only 16 oz. from the pint, gives its specific gravity as 1.064—an entirely abnormal figure. The results which we have tabulated show that the yield has little to do with specific gravity, and the variation in the latter is very trifling; the higher yields, one doubtless to more efficient pressure, indicating the presence of more extractive matter. It should be noted that in all these cases the specific gravity of the dilute acid was 1.006.

It would thus appear that there is no occasion for interference with the pharmacopœial directions, unless it be the emendation of the last sentence to "The product should measure not less than 18 fluid ounces, and should have a specific gravity of 1.033 to 1.040." Oldberg has shown that it is a mistake to make the acetum by percolation, as that is not only tedious but maceration gives a better product. The German Pharmacopœia stipulates that the acetum made as it directs should contain 5.1 per cent. of acetic acid, and this has led to the interesting observation by Dieterich that after pressure and filtration the acetum contains a trifle less acid than before, thus supporting our observation that the slight increase of density is due to extractive matter removed by pressure. Dieterich's figures deserve quotation. They are:—

	Sp. gr.	1.024	1.022	1.022	1.023
After maceration	..	5.10	..	5.16	.. 5.16 p.c. acid
After pressure	..	5.07	..	5.04	.. 5.16 .. 5.04
After filtration	..	5.07	..	4.98	.. 5.10 .. 5.04

We do not think that the British Pharmacopœia intends much pressure to be applied. The direction is "Strain with expression, and filter"—that is, squeeze the contents of the straining-cloth with the hand. The subject, as a whole, is not a large one, but we have heard it frequently discussed, and these observations may assist in allaying any suspicion that variation in yield is accompanied by variation in medicinal activity.

"THE NAME OF THE ARTICLE."

It has been several times pointed out in this journal that in labelling proprietary medicines containing poison it does not seem to be required by the Pharmacy Act that the particular poison therein contained should be named on the label. The Act requires that the name of the article, the word "poison," and the name and address of the seller, should appear on the label. In the case, then, of any of these proprietary medicines, what is the name of the article? It seems to us that the answer is obvious. The name of the article is Chlorodyne, Powell's Balsam of Aniseed, Winslow's Soothing Syrup, Kay's Essence, Atkinson's Preservative, or whatever name the maker has thought fit to give to his compound. This view, we notice, does not commend itself to the editor of the *Pharmaceutical Journal*. That authority, in commenting on a letter published by him last week says:—

The mere statement that a preparation contains "a poison" would clearly be insufficient, because the Act says "the name of the article," and unless a preparation be so authoritatively associated with a particular name that it can be thereby at once recognised as a preparation of the article of poison which it contains, there would seem to be no alternative but to put on the label the name of the poison. Thus, for instance, in the case of tinct. camph. co. a recognised name of the article is "paregoric," just as "laudanum" is a recognised name of tinct. opii, and either of those names would be, respectively, the name of the article, indicating that it is a preparation of opium. From this view of the matter it would appear that the legal advice upon which Winslow's syrup is labelled as containing "morphine" was sound and judicious. In the Matthias case, the Treasury, in prosecuting, took up the position that the sale of a preparation containing morphine is, *de facto*, a sale of morphine, and that since the name of the preparation—syrup of camphor—was no indication of the presence of poison in it, "the name of the article" required to be on the label was morphine, as that was the article of poison actually sold.

We give our contemporary's argument in full, because we suppose it says as much as can be said for the official view on the point. The contention, as we understand it, is that if an article has an "authoritative"—that is to say, a Pharmacopœia—title, as, for instance, in the cases of laudanum and paregoric, that appellation with the word "poison" is sufficient; but that in all other cases the name of the article must be supplemented by the name of the particular scheduled poison which it may contain. So that the label "laudanum, poison," which chemists all thought in order, has only been in compliance with the Act since that name has been made a Pharmacopœia synonym.

But the interpretation of an Act of Parliament so as to make it accord with somebody's theory of what it ought to say is not permissible. As a matter of fact, the Act says nothing about the Pharmacopœia name, nor about the authoritative name. It demands simply the "name of the article," and what that is is a question of evidence in each instance. The Matthias case proves nothing, as it was undefended.

[COMPOUNDING MEDICAL PRESCRIPTIONS.]

IRISH pharmacists, as we all know, have the advantage over us in Great Britain that they are legally entitled to the exclusive privilege (saving the similar rights of medical practitioners) of retailing, dispensing, or compounding medical pre-

scriptions. The expression "medical prescriptions" is defined in the Act, and it is quite conceivable that its pretation might give rise to a great deal of hair-splitting view of the long-deferred hope that we in Great Britain one day get a similar bone to dispute about, any approach towards an authoritative exposition of the term in Ireland would be welcome. For this reason we cannot help regretting that the Dublin Magistrate, in the actions recently brought before him, shirked the task of deciding whether supplying the medicines ordered on the appended prescription, the defendants had infringed the Act in the manner indicated. This was one of the prescriptions on which they were charged:—

32 Stephen's Green, Dublin,
July 14,

MR. T. FARRELL.

A bottle of Henry's magnesia.

Take a teaspoonful at night in a little milk.

A bottle of Hunyadi Janos mineral water.

Take a wineglassful the following morning with a tumbler of hot a cup of warm tea one hour afterwards.

R. L. S.

We presume, though we are not sure, that the defendant firm sent out these medicines with the doctor's directions attached. Clearly this was a "medical prescription," in the sense that it was a prescription written by a medical practitioner, but the same might be said if the doctor sent his boy to a spirit-shop for a bottle of whisky. Does not the "medical prescription" of the Act involve some sort of compound? Unfortunately, as we have already reported, this was one of the summonses which were withdrawn in deference to the Magistrate's advice.

Another curious point bearing on the interpretation of this expression was recently submitted to us. If a pharmacist, not a pharmaceutical chemist, puts up as a proprietary article a medicine compounded from the prescription of a physician, does he thereby infringe the Act? He evades the retail, dispenses, and compounds a medical prescription. The only difference is that he does it for a thousand perhaps, instead of for one. Until recently it was supposed that the saving clause as to "patent medicines" protected such business, but in view of recent developments on this side this is now doubtful.

One other point in connection with this legal problem deserves attention. At the recent prosecutions in Dublin the Society's solicitor stated that the proceedings were instituted by the Society for the protection of the public against the danger of ignorant and unqualified compounders; but in the course of the trial it was deposed in evidence that Furlong's assistant, who actually compounded the preparation, was unqualified, and that Mr. Best, whose employment was eventually fined, was a fully-qualified pharmaceutical chemist. The public may fairly ask how are they protected by an Act which seems to allow such an anomaly to exist.

WHOLESALE RESEARCH.

THE recent meeting of the British Pharmaceutical Conference provided an object-lesson to the retail druggists of this country which deserves some consideration beyond the interesting references made to it in an *ex-officio* fashion while the meeting was proceeding. We allude to the very large number taken in the proceedings by the wholesale section members. Out of twenty-three contributors of papers (ranking associated authors as one each) twelve were directly connected with wholesale or manufacturing houses, and that capacity had ascertained the facts which they were enabled to place before the meeting. The President himself was a manufacturer of chemicals; several of the

animated discussions were carried on by the wholesale men almost exclusively, and retail pharmacy, except as audience, was at a considerable discount. It would be bad for the Conference if it had to rely for its pabulum solely upon retailers, for it is questionable if they have the opportunities, which chemists attached to wholesale houses possess, of critically examining commercial medicinal products as they are supplied for distribution to the consumers. The papers by Messrs. Brown, Hodgkin, Naylor and Umney, for example, were such as involved facilities which are but rarely within the reach of retail pharmacists. Yet the subjects of these and other similar papers have a direct influence upon pharmacopœial standards, and are, therefore, of importance to medicine and pharmacy. Up to the present time the Conference has been fortunate in securing this practical assistance from wholesale chemists without the intrusion of the advertising element, which is so objectionable to many. The fact that an author is generally known to be associated with a particular house is, with the appearance of the author, sufficient advertisement if that were aimed at, and it is to be hoped it will remain at that. The matter is recalled to us by an incident which happened at the recent meeting of the American Pharmaceutical Association. Mr. F. A. Thompson, who is one of the chemists to Parke, Davis & Co., communicated a paper which consisted virtually of abstracts from his firm's laboratory note-books, and he said so. The statement aroused some caustic criticisms. If we briefly run over the subject-matter of the paper it will be seen that it was one which a wholesale man only could compile. It dealt with assays of crude drugs and qualitative analyses of chemicals received in original packages from different sources in 1891. The following paragraphs are abstracts of some of the more interesting results:—

Belladonna-leaves.—Twelve samples showed an average percentage of 0.4 atropine and hyoscyamine; maximum 0.5, minimum 0.27 per cent. In 1890 the average was only 0.33 per cent.

Belladonna-root.—Average of total alkaloids, 0.69; maximum 0.9, minimum 0.48 per cent. In 1889 the average was 0.57, and in 1890 one sample gave 1.1 per cent.

Calabar Beans came out very constant, 0.24 per cent. being the average of ether-soluble alkaloids.

Cantharides yielded cantharidin varying from 0.77 to 1.2 per cent.; average, 0.97.

Colechicum-corn was found to be almost uniform in colchicine value—viz., about 0.55 per cent.

Conium-seed.—Nine samples assayed—highest 0.91, lowest 0.17, and average 0.53 per cent. of coniine.

Ipecac-root.—Examined by Dragendorff's process. Emetine—maximum 3.74, minimum 2, and average 2.73 per cent.

Kola nuts had a big range—viz., from 0.72 to 2 per cent. of caffeine and theobromine; average, 1.26 per cent.

Stramonium.—Eleven samples of leaves showed an average of 0.38 per cent. of total alkaloids—highest 0.47, lowest 0.32—and fifteen of seeds an average of 0.35 per cent.; the variation here being wider, however—viz., from 0.17 to 0.5 per cent.

Chemicals.—Amongst the results reported we note variation in the melting-point of atropine sulphate. Some samples melted about 183° C., others fully ten degrees higher. The latter contained bright shining crystals, which appear to be characteristic of mixtures of atropine and hyoscyamine, which the high-melting samples were. Quinine sulphate was found to vary much in water-content—viz., from 6 to 16 per cent., or an average of 11.74. These were mostly of German manufacture. American quinine contained 16 per cent. of water of crystallisation.

That such information as the foregoing is of direct practical value to retailers is obvious, and no excuse is necessary for communications of the kind being made to such representative bodies as the British Pharmaceutical Conference and the American Pharmaceutical Association. It is one means

of tapping the very large volume of research which is annually done in manufacturing laboratories, and medicine and pharmacy will be the better if such results continue to be freely published. Fortunately, in this country we do not face the difficulty which has beset our American brethren, as our authors do not, as a rule, insist upon their firms being mentioned in their papers, and if they do, the spirit of their audiences is such that the procedure is rather to their detriment than otherwise. It is never good policy for anyone to make it obvious that he has "an axe to grind," and British pharmaceutical sentiment is strongly opposed to that being done in public meetings.

THE SHOP HOURS ACT 1892.

THIS ACT, which became operative on September 1, replaces in the statute-book the Shop Hours Regulation Act of 1886 in a permanent and more perfect form. The latter measure had to be re-enacted from year to year. The Act now in force provides that no "young person" (that is, a person under the age of 18 years), may be employed in or about a shop for a longer period than seventy-four hours, including meal-times, in any one week. It further specifies that if any such young person has been employed in any factory or workshop as defined by the Factory and Workshop Act, 1873, he or she may not be, to the knowledge of the employer, employed in or about a shop for a longer period than will, with the time in the factory, complete "such number of hours." [It is presumed that the Legislature meant to limit the total working-hours of the young person to the sixth part of the seventy-four hours per day, but they have expressed themselves in a strangely confused manner in this section.] A shop is defined in the Act to mean "retail and wholesale shops, markets stalls, and warehouses in which assistants are employed for hire," and includes licensed public-houses and refreshment-houses of any kind. For every infraction of the Act the employer is liable to a penalty of 1*l.*, but he may transfer his liability to some other person if he can prove to the satisfaction of a Court that he himself used due diligence to ensure obedience to the Act, and that it was infringed without his knowledge, consent, or connivance. Offences are to be prosecuted and fines recovered as under the Factory and Workshop Act, and county and borough councils may appoint inspectors to execute the Act. All shopkeepers are to exhibit a notice in their shops in a conspicuous position referring to the Act, and stating the number of hours in the week during which a young person may lawfully be employed in that shop. Nothing in the Act is to apply to a shop when the only persons employed are members of the same family, dwelling in the building of which the shop forms part or to which the shop is attached, or to members of the employer's family so dwelling, or to any person wholly employed as a domestic servant.

COMMENTARY.

IRON IN BONE BLACK.—Some remarks were made at the Conference meeting, during the discussion on Mr. Hodgkin's paper, on the peculiar fact that after treatment with mineral acids, animal charcoal still contains iron, which is dissolved out by such things as alkaline citrates. In this connection we recall a recent communication to the *Chemical News* by Mr. B. Terne, in which he stated that bone-black does not yield up its iron to solutions of citric acid—anyway, not when a 0.1 or 0.25 per cent. solution of that acid is exposed for twenty-four hours at nearly 100° to bone-black containing as much as 0.5 per cent. of iron. In fact, he finds that fresh, sugar-house bone-black removed all the iron from citric-acid

solutions previously rendered dark yellow by the addition of one-tenth per cent. of the metal. It seems curious that an alkaline citrate can do what free citric acid cannot. How is that explained?

THE ACTION OF THE SYNTHETIC QUININES.—It is known that MM. Grimaux and Arnaud have prepared three forms of synthetic quinine—viz, methylic ether of cupreine (methyl-cupreine), ethylic ether of cupreine (ethyl-cupreine or quinethyline), and propylic ether of cupreine (propyl-cupreine or quincpropyline). The physiological action of these compounds has now been tested by M. Laborde (*Répertoire de Pharmacie*), who found that they all possessed physiological properties similar to those of quinine. They are antipyretic and analgesic in varying degree. Their action becomes more pronounced in proportion as the substituted group belongs to a higher series. Cupreine is the least active, then quinethyline (the hydrochlorate of which is sufficiently soluble for hypodermic injection), and quincpropyline is the most powerful of the three. The latter reduces the temperature of the human body four degrees within an hour, and produces also convulsions of an epileptic character.

PROTEID HYDROCHLORIDES.—Dr. Lockhart Gillespie, of the Edinburgh Royal Infirmary, in a paper to the British Medical Association, states that proteids have a weak affinity for hydrochloric acid, and although the combination is by no means strong he suggests that the compounds should be called proteid hydrochlorides. If no free hydrochloric acid be present these bodies strike no scarlet colour with Güzberg's vanillin phloroglucin, with Boas' resorcin, or with Möhr's sulphocyanide reagent. They lose none of their acidity on evaporation to dryness, unlike the free acid. They have however, the same saturating power as the original hydrochloric acid. The percentages of acid to proteid are as follows:—In the case of albumen 1 to 7.5, acid-albumen 7.5 to 9, proto-albumose 11, Deutero-albumose 13, and peptone 17 to 20. Dr. Gillespie considers that during the process of digestion when proteids reach the stomach, the hydrochloric acid is secreted and combines at once with them. Until the albumen molecule combines with at least 7.5 per cent. of acid, it still has the properties of albumen; above that percentage it behaves like acid albumen. This in time splits up into the smaller molecules of proto-albumose, each of which has 11 per cent. HCl attached to them, and so in like manner the proto-albumose divides into Deutero-albumose, and that into peptone.

LIVERPOOL CHEMISTS SHOULD READ ALPE'S "HANDY BOOK."

THE Somerset House officials have been busy in Liverpool during the last few days. Fines have been imposed on several chemists for non-compliance with the Medicine-stamp Acts. Among the articles purchased have been mixtures put up by chemists for bowel complaints and cholera. Three or four chemists have suffered for offering effervescent antipyrin with labels representing the article as a remedy "for nervous headache, &c." Others were brought to book in regard to infants' preservatives, and one for a tic mixture. In another case, a chemist sold fluid extract of sarsaparilla, which was declared on the label to be good for curing certain diseases. This, the authorities said, rendered it liable to stamp duty. The chemist claimed that it was a B.P. article, and thought it was therefore exempt. He was let off this time with a caution. Another chemist was asked for sixpennyworth of antibilious and liver pills, which he tendered in a box of the usual style, with label stating that they would "correct irregularities." The authorities are correcting this irregularity. One sold a bottle of specific dily stamped, but the stamp was not over the cork, and he has had an intimation that it must be properly stamped in future.

NOTES ON THE RIDDANCE OF WEEVILS BY A DEAD LOBSTER.

By ALBERT J. SALMON, Lncea, Hanover, Jamaica.

RATHER a funny subject to write about, and although not pharmaceutical, I think it of sufficient importance to call your attention to it.

Nearly three years ago I experienced great difficulty in keeping certain substances from the ravages of weevils, which are well known for destroying grain. Thousands of these pests, consisting of different kinds, would, in a few days, destroy any fresh supply of seeds, roots, and farinaceous substances; in fact, I had to abandon the keeping of some of these articles.

I spoke to several persons about my grievance, and a friend advised me to hang up a dead lobster in the store.

A dead lobster? Why, what an absurdity! What effect would it have on thousands of these voracious insects? However, I thought it would do no harm to carry out the suggestion.

A live lobster was procured, its appendages tied together, a string passed around the body, and my would-be deliverer hung up in the open air and under a tree. Eight weeks of sun and rain "cured" it. It was drained of its contents, free of all smell, and hung up in the store.

Within a few weeks I observed several moths hovering about, and on opening some of the jars, &c., containing the articles, I found the same kind of moths in them. I had very often seen them, but took no special notice of them. They and the weevils quickly forsook their homes, and ever since I have been able to keep the articles in good condition.

I cannot account for the effect this odourless and empty-shelled crustacean has had on these insects, but it has undoubtedly cured the evil.

Such articles as cattle-food, &c., I now keep in a covered tin with a few toes of the lobster strewed in it.

HOW INDIARUBBER TEATS ARE MADE.

THE manufacture of indiarubber teats is said to be one of the most interesting parts of the indiarubber trade. Girls are largely employed in it, as delicate fingers are a necessity. Three kinds of indiarubber are used in making teats—viz., white, brown (or maroon), and black, those sheets with the fine parallel lines being preferred. These lines are known technically as "print," and are imparted to the rubber by mechanical means, impression-plates being used for the purpose. After the sheets are so printed, they are heated in order to shrink them, and then given to the nipple-cutters, who may cut several sheets at once, using a very sharp die. The pieces, when cut, are, for small teats, nearly heart-shaped; for large ones, cone-shaped. In the former the seam extends from the bottom on one side and just over the crown, the other side being seamless; while in the latter the seam completely divides the teat. Small teats are, therefore, made in one piece, and large ones in two pieces. To cut the latter two sheets are laid together with the print inside. The natural stickiness of the stock holds these pieces together, which helps materially in the making-up.

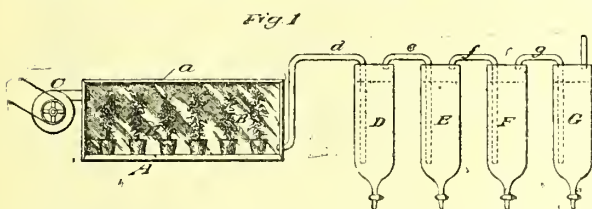
After the pieces have been delivered to the makers, the next process is cementing. The pieces are neatly laid in piles, and then, by means of a small brush, painted with a cement made of "mixed-sheet" dissolved in naphtha. They are then spread upon tin plates to dry over a small steam-oven.

Next the flange at the lower end of the teat is made. For this purpose the cement-brush is again brought into requisition, and the lower end cemented. When dry, the operator with the right thumb presses firmly on the lower edge with an upward motion. This turns it over a little, and, when continued around the stem, makes a small ring at the lower end, a continuation of which brings out the flange. Large teats are cemented, seamed, and flanged, and then turned inside out, so as to bring the print outside. When finished the teats, moulds, &c., are packed in shallow pans half-filled with talc, then filled up with talc and run into the

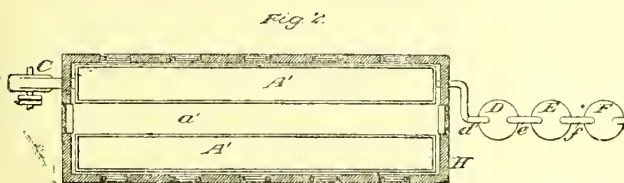
heater. After this has been done, each worker gets her own lot to sift, and has to remove the teats from the moulds. There is a knack in doing this which only the workers know. The teats are next thoroughly washed and cleaned with potash solution. Then comes the punching of the holes in the crown. This is done by hand. Small punchers are set in standards at each table. The teat is placed upon the punch and hit firmly with a small wooden mallet. For a finishing touch the girls take them again in hand, pack them in paper boxes, and the teats are ready for market. The girls employed take very great care of their finger-nails. These before all other tools are a necessity. If brittle, the utmost care in trimming is taken, and they are washed, scrubbed, and oiled with daily solicitude. A cracked nail is a calamity, as no seaming at all can be done until it is grown to the proper length.

A NEW PERFUME PROCESS.

MR. ROBERT A. CHESEBROUGH, of vaseline fame, has patented a process for extracting perfumes from flowers. The peculiarity of it is that the flowers are not destroyed, but as they grow the perfume-laden air of the conservatory is drawn through some absorbent, such as spirits, whereby, Mr. Chesebrough says, we obtain a perfume free from the contaminating odours which always accompany plucked or crushed flowers. The apparatus is shown in the subjoined sketches. In fig. 1 we have the plant-enclosure, A, which has a glass top and front, *a*. The plants are represented



by B, the blower by C, and the receiving-vessels by D, E, F and G. The height of the liquid in the vessels is represented by a dotted line, the air being discharged from pipes *d*, *e*, *f*, and *g*. Fig. 2 is a top plan of the enclosure. Here the con-



servatory is represented by H, the enclosures of the flower-beds by A', the passage-way by *a'*, and the blower and the receiving-vessels by the same letters as in fig. 1.

When the apparatus is to be used it is securely closed and all the parts properly connected; then the blower is set going, and the perfume-charged air heavily laden from the enclosure is first passed through the liquid in the receiver D, which absorbs most of the perfume; then into the next and next, the last receiver G being filled with distilled water, for the purpose of absorbing any alcohol and perfume which may be evaporated from the preceding vessels. When growing plants are employed, the fresh air supplied to the plants and the sunlight through the glass portion of the enclosure will keep the plants in good condition, the necessary moisture being supplied from below, so that the process may be continued throughout the natural life of the plant and the perfume will be of the most delicate nature.

These particulars we take from the patent-specification lodged at the Washington Patent Office; but to what extent the scheme is workable we do not commit ourselves. From a hundred rose-trees it will take a lot of drawing, we judge, to get a pint of rose-water.

AT THE COUNTER.

FLORES ANTHEMIDIS were supplied by a Peckham chemist when "camphor wild flowers" were asked for, and the conf. arom. bottle met the demand for "automatic confession."

"PENNORTH O'NITER BALLS, and d'you ha' to swaller the spettle?" This was asked at the counter of Messrs. Ballard & Co., Farrington, Berks.

FROM Mr. G. E. Crick, Malden, Essex: "Please I want a bottle of your whooping cough emigration."

THE following prescription was dispensed last week in the East Dulwich Road:—

℞. Sweet nitre.
℞. Lumgoajum.

Twopence paid for ingredients; nothing for translation.

THIS recipe, which reaches us from the Mile End Road, may be of value. It seems to us that in somewhat larger supply it would be as useful "for a sweetheart unkind." "F a horse unkind 10 drops hctral roses, 10 drops concaled oil lavender, 10 drops nightrea, on half dram swek last of musk."

"AMONGST other inquiries this week," says a Leicester correspondent, "I find the following:—Oil of varments. salts of sorrow, sweet essence of summer, harmonium, ever-fizzing magnesia. So far it has been plain sailing, but when a lad came in for a pennyworth of hi-tiddle-ty-ti's, I felt nonplussed. Is this some new kind of sweetmeat?"

MR. W. H. JOHNSON, of Salford and Oldham, tells us of a customer whose financial ingenuity is worthy of record. Day after day he sent for the following articles, one being purchased each day:—

	<i>d</i> .
1 oz. bismuth. carb.	8
1 oz. liq. potassæ	1
4 oz. tinct. sennæ co.	9
One pennyworth pulv. tragac. co.	1
2 oz. sp. ammon. arom.	6

The prices were quoted from a store list published in the neighbourhood. Having completed these purchases our economical friend then sent back the whole of his medicinal collection with the following prescription:—

Bismuth. carb.	5 <i>ss</i> .
Liq. potassæ	5 <i>ss</i> .
Tr. sennæ co.	5 <i>ss</i> .
Pulv. trag. co.	gr. iv.
Sp. ammon. co.	5 <i>ss</i> .
Aq. menth. pip. ad	5 <i>ss</i> .

Ft. mist. 5*ss*. ter die

—with the request to have it made up from that stock, and charge for the trouble.

THE west-end of Princes Street, Edinburgh, is supposed to be enlightened and its *habitués* cultured. Anyway, it is not long ago that a gentleman entered a pharmacy there, asked for a box of Beecham's pills, and tabied a guinea! The chemist deplores now that he gave a sovereign in change.

AT the counter in New Zealand means money. The Wellington correspondent of *Chemist and Druggist of Australasia* says: A half-caste went to a chemist's shop in Wellington a few days ago and asked for cotton wool to put in his ear. When asked how much he would have, said, "Oh, give me a pound's worth," and, suiting the action to the word, placed a 1*l*. note on the counter. It is needless to say he contented himself with a much smaller package.

Scientific Notes:

On Chemistry, Pharmacy, Botany, Materia Medica, &c. Original, Selected and Translated.

MANUFACTURE AND PROPERTIES OF PYROGALLIC ACID.

P. CAZENÈVE has reported to the Academy of Sciences that on adding to gallic acid double its weight of aniline, the mixture congeals abruptly into a mass, with a rise of temperature. On the application of heat aniline pyrogallate is obtained in long, unstable crystals, from which the aniline may be removed by cold benzene and toluene, leaving pure pyrogallol. He also states that the melting-point of pyrogallol is 132° (not corrected), and not 115° as stated by the text-books. Compare with this vol. xl. page 773.

ALKALOIDAL REACTIONS.

THE following reactions are described by D. Vitali, and are referred to more fully in the *Journal of the Chemical Society* (lxii., page 755):—

Hydrastine, a small crystal, placed on a porcelain capsule and covered with concentrated sulphuric acid (0.5–1 c.c.), turns yellow, and, on stirring, the liquid acquires the same colour; on adding a small fragment of nitre (an excess must be avoided), the colour changes to a more or less intense brownish yellow. Add solution of stannous chloride drop by drop, and the solution acquires a magnificent reddish-violet colour, the intensity of which depends on the amount of alkaloid present. The coloration is not destroyed on dilution with water.

Berberine turns blood-red when treated similarly with concentrated sulphuric acid and nitre, the colour changing to green on the addition of stannous chloride.

Codaine turns dark brick-red when alcoholic potash is added to its solution after treatment with nitric acid, and coffee-coloured when further treated with sulphuric acid.

Narcotine acquires an orange colour on addition of the potash, the colour changing to violet-red on adding sulphuric acid, and red to yellow on diluting with water.

THE ESTIMATION OF URIC ACID IN URINE.

MR. F. GOWLAND HOPKINS, in a paper read before the Royal Society, suggests a process which depends upon the complete insolubility of ammonium urate in saturated solutions of ammonium chloride. The pure chloride is powdered, and added to the sample to complete saturation. After two hours' standing, the whole of the uric acid separates as biurate of ammonium. The urate is then decomposed with hydrochloric acid, and the liberated uric acid determined by any approved method. In contrast to the well-known Fokker-Salkowski process the separation is rapid and complete. Mr. Hopkins has experimented with permanganate solutions for the titration of the separated uric acid, and finds that accurate results may be obtained by their employment. For this purpose the uric acid is dissolved in 100 cc. of water, with a minimum of sodium carbonate, 20 cc. of strong sulphuric acid being then added, and the solution immediately titrated with one-twentieth normal permanganate of potassium. The addition of 20 per cent. sulphuric acid to the previously cooled solution of sodium urate yields just such a temperature (about 60° C.) as is requisite for a determinate reaction. 1 c.c. of the permanganate solution is equal to 0.00375 grm. uric acid.

PASTEURISING FOOD.

AT a recent meeting of the Amsterdam Royal Academy of Sciences, Professor T. Forster read a paper on the action of heat upon tuberculous matter. According to former investigations, by "Pasteurising" (i.e., warming liquids to a temperature of 60° to 80° C. for a short time and cooling them immediately), bacteria of Asiatic cholera and typhoid fever are killed at about 60° . From a hygienic point of view, it is of still more importance to discover what is the lowest temperature at which the bacilli of tuberculosis are destroyed. It is established that tuberculosis is produced by the consumption of milk secreted by tuberculous cows. Meat also, coming from tuberculous cattle, sometimes contains infectious matter. By boiling-heat, indeed, the bacilli of tuberculosis are killed. But if meat is prepared in the usual manner, even small pieces of it are not warmed thoroughly

at 100° C.; milk, on the other hand, changes in taste if boiled, so that most people do not like boiled milk. By a series of experiments recently made, Professor Forster has settled that the bacilli of tuberculosis are destroyed by a temperature of 60° C. acting during one hour, and by the action during six hours of a temperature of 55° C. Higher temperatures than 60° —for instance, 80° , 90° , or 95° C.—destroy the infectious matter in milk from tuberculous cows, if they act during ten minutes; "Pasteurising," however, at 80° during one minute does not hurt the bacilli of tuberculosis.

OLEUM RUSCI, THE SOURCE OF RUSSIA LEATHER ESSENCE.

MONS. F. VIGIER communicates a note to *Repert. de Phar.* on "The Oils or Essences of Birch Employed in Medicine," which consists chiefly of a description of birch-bark tar (*goudron de bouleau*), otherwise known as "Degutt," or "Dagget," and employed in medicine under the names of *Oleum betulinum*, *Ol. rusci*, *Ol. Russicum*, *Ol. Moscoviticum*, and *Ol. Lithuanicum*. This tar is made mostly in the provinces of Vladimir, Perm, Viatka, and Kostrovna, in Russia, by a process of rough destructive distillation, the apparatus employed being of a primitive description. A distillation takes twenty-four hours to complete, being commenced at a moderate heat only, which is gradually increased. The tree (*Betula alba*) is stripped of its bark in May, and the bark is left standing until the month of December, which is the period selected for distillation. It is very difficult to obtain the tar in the pure state, as it is commonly mixed with coniferous tars, from which it differs by the characteristic of retaining its fluidity, on which account (as well as for its odour) it is used for currying leather. *Oleum rusci* is distinguished chemically by its yielding on distillation a fifteenth of its weight of a peculiar phenol, which possesses the odour of Russia leather; after this part distils over, a large proportion of terebene distils, and the fraction distilling between 250° and 300° is of a very remarkable dichroic character, being of a magnificent red by transmitted, and bright green by reflected light. The tar contains neither acids nor alkaloids, nor any of the benzene hydrocarbons. The tar is imported into Western Europe in barrels of 150 kilos., and there are several factories in Paris and Cannes where it is distilled with water, in order to produce an essence or volatile oil, which is used by glovers and other makers of fancy leather articles for imparting the odour of Russia leather to their goods. The oil is also used to a less extent in perfumery, and the tar has been used therapeutically in the treatment of certain skin-diseases. The essential oil has a brown colour, but on redistillation it is obtained straw coloured, and this redistilled variety is preferred.

Gazette.

PARTNERSHIPS DISSOLVED.

Bernstein & Leuty, Crutchedfriars, City, drug and chemical merchants.

Farrar, J. R., and Martin, R. W., under the style of B. Martin, Southport, horse and cattle medicine makers.

King & Grant, Woburn Sands, Woburn, and Apsley Guise, medical and surgical practitioners.

Mackenzie & Snape, Welbeck Street, Cavendish Square, W., general medical practitioners.

Retallack, W., and Blackett, F., under the style of Player & Retallack, Great Russell Street, W.C., and elsewhere, medical electricians.

Tutt & Gravett, Worthing, mineral and aerated-water manufacturers.

Watkins, E., Hawkins, T. F., and Thomas, D. R., under the style of Cousins, Thomas & Co., Oxford, chemists and druggists.

THE BANKRUPTCY ACTS, 1883 AND 1890.

RECEIVING ORDER.

Denny, Charles John, Regent Street, W., and Blackwater, Hampshire, physician.

ADJUDICATIONS.

Denny, Charles John, Regent Street, W., and Blackwater, physician.

Vincent, John Coombe, Bristol, brush and comb manufacturer.

BRITISH AND FOREIGN CONSULS' REPORTS.

GREECE.

The Greek Drug-trade The Greek official statistics for 1891 have not yet been published. Those for 1890 which our consul at Athens sends over show a considerable increase in the imports of medicines and perfumery over 1889, but a still larger falling-off in the imports of heavy chemicals. The figures showing the imports of pharmaceutical goods into Greece from various countries are as follows:—

Country	Quinine		Other drugs and medicines	
	1889	1890	1889	1890
	oz.	oz.	lbs.	lbs.
United Kingdom	23,888	14,080	51,000	112,000
France	24,364	720	94,000	119,000
Belgium	8*0*	—	—	—
Germany	44,280	29,984	51,000	69,000
Austria-Hungary	13,694	25,080	123,000	141,000
Italy	13,867	7,363	41,000	43,000
	120,943	77,230	360,000	484,000

Country	Soap and perfumery		Heavy chemicals and acids	
	1889	1890	1889	1890
	lbs.	lbs.	lbs.	lbs.
United Kingdom	49,000	74,000	2,806,000	2,723,000
France	36,000	64,000	3,719,000	334,000
Belgium	—	—	203,000	117,000
Germany	2,000	2,000	155,000	83,000
Austria-Hungary	—	—	174,000	150,000
Italy	—	—	255,000	64,000
	87,000	140,000	7,312,000	3,531,000

Quinine. I can obtain no explanation, says Consul Elliott, of the great decline in the importation of this drug, except that there must have been an over-importation in 1889. In view of the simultaneous increase under the heading *Other medicines and drugs*, I surmise that its place may have been taken by antipyrine and similar preparations, but I can obtain no confirmation of this conjecture. It has been suggested to me that sanitation has improved, and this is no doubt true as regards the capital and some other towns; but the bulk of the quinine is consumed in the low-lying country districts. The greatest decline was in the quinine brought from France, the quantity having fallen from 24,364 oz in 1889 to 720 cz. in 1890.

Chemicals. Although including acids, which obtained a reduction of duty, chemicals show a diminution of 45 per cent, the decrease in British imports being, however, only 18 per cent.

Soap and Perfumery. A small trade, shows an increase. The duty on high-class soaps is nearly prohibitive, even with the reduction stipulated by the French Convention.

JAMAICA.

Manufacture of Lime-juice. The crude lime-juice is obtained either by running the limes through an ordinary cone mill, or by placing them in a squeezer especially adapted to the purpose, which is the simpler and more usual plan.

The juice is then clarified by straining and filtration, when some foreign substance is added to prevent decomposition of the vegetable matter. In this state most of the juice is shipped from the island.

In order to concentrate the juice, it is strained from the seed and pulp, placed in a copper battery and boiled on the same principle as sugar, taking care not to scorch or burn it, as that destroys the acid. The more densely the juice is

concentrated the more valuable it is; but it is not advisable to go too far, as it burns easily without forming a crust on the copper. No iron vessel must be used, as the iron turns the acid black.

In the year which ended March 31, 1891, the amount exported was 53,884 gallons, of which 44,492 gallons went to the United Kingdom, 110 to Canada, and 9,282 to the United States.

The average valuation in the export list is 20 cents per gallon, but the price for the raw juice ranges from 18 to 30 cents, according to the supply and the demand, while the concentrated juice sells according to the percentage of citric acid it contains.

Substantially the same process is adopted in the manufacture of sour-orange juice, which, when concentrated, is valued at from 45 to 50 cents per gallon. Of this 1,102 gallons, the entire amount manufactured during the period above stated, was exported to the United States.

RUSSIA.

The Naphtha Business. The yield of petroleum from the Baku fields is larger this year than it has ever been before, and the existing works are scarcely able to cope with the supply. The house of Chibabiev are constructing near their factory in Baku an immense underground reservoir capable of containing 5,000,000 pounds of naphtha. This reservoir is not to be rectangular, but to take the form of a reversed cone or funnel shape. The firm of Nobel are constructing a still larger reservoir, which will have a capacity of 6,000,000 pounds. The walls will be lined with zinc, and the foundation will be a bed of water, to be obtained by boring.

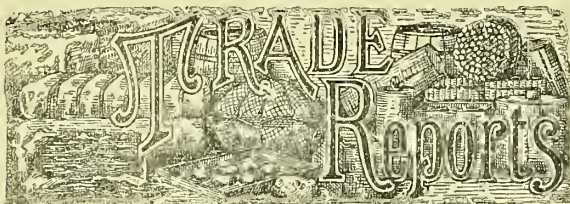
Mud Baths. A curing establishment of very large dimensions is being brought to completion on the shores of the Kujalnik Liman, an excessively salt and shallow lake distant about nine miles from the city of Odessa, where hot and cold mud baths are administered to persons suffering from rheumatism, skin complaints, and other such like diseases. The effects of these baths are reported to be of great value, and they will, no doubt, in time become of world-wide fame.

Quicksilver. The only quicksilver mine, situated in the South-Western part of Russia, near Nikitofka station, on the Kursk-Kharkov-Azov line, Bakhmoot district, in the province of Ekaterinoslav, shows an output of 50,114 tons of ore, or a decrease of 3,404 tons of ore extracted, as compared with 1890. Of this quantity 45,547 tons were kilned, producing 314 tons of quicksilver, 30 tons more than in 1890. At present 350 men are employed, of whom 226 work underground.

The Liquorice Industry. More liquorice is exported every year from the Caucasus (85,000 lb. from Batoum in 1891), and the export seems likely to increase. It is chiefly got in the district lying between Elizavetpol and Hadji Kabul, where it is brought by the natives to depôts established for its reception by the different firms during the winter months, no difficulty being experienced in getting the quantity required. The price to the natives on the spot is about 25s. per ton for green root, and for wood delivered at a railway station 30s. to 32s. per ton. The green root is reckoned to yield about 45 per cent. of dry. With the exception of a few tons all the liquorice exported goes to America.

British Liquorice Works. In the province of Transcaucasia there are two British factories for the preparation of liquorice-root—those of Mr. Bliss, at Elizavetpol, and Mr. Urquhart, at Udjari—which are employed in collecting, drying, and pressing by hydraulic presses liquorice-roots. Liquorice-paste, which has begun to be manufactured in Mr. Bliss's factory, and is about to be in that of Mr. Urquhart, has not yet been exported from the Caucasus. The number of hands employed by each factory varies from 50 to 300, according to season, at wages varying from 8d. to 1s. 2d. per diem; and at outside collecting stations some 300 more, the greater number being employed in autumn and spring. This does not include the regular staff of two or three engineers, about six machine hands, twenty to twenty-five clerks, and about sixty hands. Nearly all the inhabitants of the district find employment in digging the root at seasons when there is no other work to do.

* Probably all German quinine.



Notice to Retail Buyers:—It should be remembered that the quotations in the section are invariably the lowest net cash prices actually paid for large quantities in bulk. In many cases allowances have to be added before ordinary prices can be ascertained. Frequently goods must be picked and sorted to suit the demands of the retail trade, causing much labour and the accumulation of rejections, not all of which are suitable, even for manufacturing purposes.

It should also be recollected that for many articles the range of quality is very wide.

42 CANNON STREET, E.C., September 7.

The London Markets.

ACETANILID.—The price has been lowered to 1s. 7½d. per lb. in bulk and 1s. 10½d. to 2s. 2d. per lb. for bottles, according to quantity and packing.

ACID (CITRIC).—Business was done yesterday at 1s. 5½d. per lb. in the second hand. B.P. acid can no longer be had from the manufacturers at that figure, and is held nominally 1s. 6d. per lb. The following statistics are certainly noteworthy as an indication of the position of the drug:—

Imports of Lemon-juice into London.

	1889	1890	1891	1892
	Pipes	Pipes	Pipes	Pipes
August ..	189	156	74	130
Eight months ..	3,474	2,945	1,516	1,325

Exports of Citric Acid from London.

	1889	1890	1891	1892
	Cwt.	Cwt.	Cwt.	Cwt.
August ..	411	712	355	722
Eight months ..	3,918	4,371	3,142	5,222
September-October ..	1,163	1,135	1,150	—
November-December ..	975	701	878	—

ALCOHOL.—German potato-spirit is dull of sale, and offering at 9d. per proof gallon "c.i.f." terms (in bond), for best brands by 2,000 gallon contracts.

ANISE.—The season for star-anise in China is now at an end. The new crop is due in October, and is already being offered for shipment at the rate of \$32 per picul. *Russian* seed is tending rather firmer, with very little on offer.

BALSAM (CANADA).—Prices are very low now, new crop, bright and thick being offered at 1s. per lb. c.i.f. terms (in barrels) from New York.

BALSAM COPAIBA.—No genuine *Maranham* is at present to be had in New York, and the other varieties are said to be selling rapidly as consignments come in. *Pará* offers at 1s. 7d. per lb. c.i.f. in 1 cwt. kegs. In Liverpool the available stock of *Maranham* has recently been cleared at higher rates. Since then some arrivals have taken place, but these have also been sold at 1s. 7d. for cloudy and 1s. 8½d. per lb. for good bright.

CAMPHOR (REFINED).—The German makers, it appears, have not followed the recent advance in price of their English colleagues; one of them "has no quotations," another offers at 1s. 6½d. per lb. net terms.

CANARY-SEED.—A hundred bags Turkish canary-seed sold at 82s. 6d. at the end of last week. Since then the market has been quiet, but very steady, at 85s. to 90s. for *Spanish*, and 82s. 6d. to 85s. for *Turkish*.

CARAWAY.—*Dutch* seed has advanced to 24s. or 24s. 6d. per cwt. ex warehouse for good bright quality. A considerable part of the supply has been secured by speculators, and prices are still tending higher.

CASCARA SAGRADA.—An advance is reported to have taken place on the Pacific sea-board, and it is asserted that the best parcels offered from there have been bought up by speculators. This year's crop of fine quality is now offered from New York at 30s. per cwt. c.i.f.; last year's at 34s. per cwt. "c.i.f." terms.

CEVADILLA-SEED continues to advance, and the price of veratrine has thereby been seriously affected.

CHLORATE OF POTASH.—Has advanced considerably during the week. From 6½d. up to 7d. per lb. has been paid on the spot here, and 6½d. per lb. f.o.b. in Liverpool.

CINCHONA.—The better position of the bark and quinine markets were probably the cause that a rather larger quantity of cinchona than usual was put up for sale on Tuesday. The catalogues comprised:—

	Packages	Packages
	1,214 of which	1,011 were sold
Ceylon bark ..	284	207
East Indian bark ..	76	76
Java bark ..	184	184
African bark ..	536	476
S. American bark ..	2,294	1,984

The small quantities of East Indian, as compared with Ceylon bark, which have been offered recently are accounted for by the fact that our imports of Indian bark take place almost entirely in the first half of the year. African bark has now become quite an institution at our auctions. It keeps coming over in quantities much in excess of the expectations first entertained, and most of it is of fairly good quality, though generally damaged before shipment. At to-day's sales the holders of bark generally were very firm, and about 15 per cent. of the total offered was bought in at high limits. Much of the bark was of good quality, and there were several very good lots of *Succirubra* and *Ledgeriana* from Ceylon. The average unit value was slightly above that of our last sales—viz, 1½d. per lb., and for a few good parcels higher rates were occasionally paid.

The following are the approximate quantities purchased by the principal buyers:—

	Lbs.
Agents for the Mannheim and Amsterdam works ..	171,518
" Stuttgart and Frankfurt-o/Main works ..	60,707
Messrs. Howards & Sons ..	37,518
Agents for the Brunswick factory ..	31,335
" Paris (Pelletier) factory ..	24,090
" American and Italian works ..	22,259
" Auerbach factory ..	21,876
Sundry druggists ..	23,355
Total quantity sold ..	392,658
Bought in or withdrawn ..	72,225
Total quantity offered ..	464,883

It should be well understood that the quantity of bark purchased affords very little clue to the quantity of sulphate of quinine represented by the purchases of each firm. The following prices were paid for sound bark:—

CEYLON CINCHONA.—*Original.*—Red varieties: Ordinary woody to fine bright quilly stem and branch chips, 1½d. to 3½d.; one parcel, 4d.; dull chips and shavings mixed, 1½d. good to fine strong shavings, 2½d. to 4d.; dust, 1½d. to 1¾d. per lb. Grey varieties: Very thin and poor to good strong quilly stem and branch chips, 1½d. to 4d.; dusty root, 3½d. to 3¾d. per lb. Yellow varieties: Dull small and dust branch chips, 3d. to 4d.; good strong quilly branch and stem chips, 5½d. to 6½d.; good bright root, 6½d.; dust, 2d.; broken quill, 4½d.; low Calisaya chips, 1d. to 1½d. Hybrid varieties: Ordinary to fair quilly stem chips, 2d. to 3½d.; fair root, 3½d. to 4½d. per lb. *Renewed.*—Red varieties: Good to fine quilly branch and stem chips, 2½d. to 4d.; ditty spokeshavings, 2½d. to 4½d. per lb. Common weak to fine strong quilly grey stem chips, 2½d. to 7d. per lb. Fair to fine bright yellow stem chips, 5½d. to 9d. per lb. Hybrid stem chips, 3½d. to 4d. per lb.

EAST INDIAN CINCHONA.—*Original*: Partly damaged dull quilly mixed chips, $1\frac{3}{4}d.$ to $2d.$; damaged root, $2d.$ per lb. Dull to fair quilly grey stem and branch chips, $2\frac{3}{4}d.$ to $3\frac{1}{4}d.$; damaged ditto, $1\frac{1}{2}d.$ to $2d.$; dusty root, $3d.$ per lb. Fair yellow stem chips, $4\frac{1}{2}d.$ to $5\frac{3}{4}d.$ per lb. Hybrid chips, $2\frac{3}{4}d.$ per lb. *Renewed* red stem chips, $3d.$ per lb. Good quilly grey stem and branch chips, $6d.$ to $7d.$ per lb.

JAVA CINCHONA.—Yellow dusty stem chips, $3\frac{1}{4}d.$ to $4d.$; good ditto shavings, $6d.$ per lb.

AFRICAN CINCHONA.—Bold, partly broken, and irregular red quill, $3d.$ to $3\frac{1}{4}d.$ per lb.; damaged ditto, $1\frac{3}{4}d.$ to $2\frac{3}{4}d.$ per lb.

SOUTH AMERICAN CINCHONA.—Cultivated Bolivian Calisaya, in rather irregular brown to fine bold silvery quill, $5\frac{1}{2}d.$ to $8\frac{3}{4}d.$; chips, $3\frac{3}{4}d.$ per lb.

The total exports of cinchona from Java during the month of August were 490,000 Amsterdam lbs., against 678,000 lbs. in August, 1891. The following results of sales show the general tendency of the auctions:—

	Per cent. s.2.	Per lb.
20 bales Original succirubra shavings..	1.46	sold at $1\frac{1}{4}d.$
13 " " " stem chips	1.40	" $1\frac{3}{4}d.$
29 " " officialis chips ..	2.22	" $3d.$
21 " " succirubra ..	2.32	" $3d.$
33 " Renewed officialis ..	3.61	" $4\frac{3}{4}d.$
15 " " succirubra ..	2.52	" $4d.$

CLOVES.—*Zanzibar* cloves for shipment have been a little firmer this week, with sales at $2\frac{1}{2}d.$ per lb. for January-March shipment. At auction *Zanzibar* cloves were quiet but steady with small sales at $2\frac{7}{16}d.$ to $2\frac{1}{2}d.$ per lb. for medium to fair. Common to good picked *Java* sold at $4\frac{1}{2}d.$ to $6\frac{1}{2}d.$ per lb.

COCAINE.—Manufacturers are now willing to accept 18s. per oz. for hydrochlorate in bulk.

COCA-LEAVES.—Fine green *Truxillo* are being offered from New York as low as 1s. 4d. per lb. c.i.f. terms. Further arrivals of 49 bales of Java coca-leaves have taken place at Amsterdam.

COCOA-BUTTER.—At the monthly auctions on Tuesday 300 2-cwt. cases of Cadbury's cocoa-butter sold at an advance of $1d.$ to $1\frac{1}{4}d.$ per lb., from $13\frac{3}{4}d.$ to $14\frac{1}{2}d.$ per lb. being paid.

COPPER (SULPHATE).—Flat and easier. Good brands may now be bought at 14l. 7s. 6d. per ton in London, or at 14l. 10s. per ton f.o.b. Liverpool.

CORIANDER.—There has been a somewhat better demand for coriander-seed, and holders are not willing to accept less than 8s. 6d. per cwt. ex warehouse.

CUBEBS.—Sixty bags were imported in the *Benalder* from Singapore this week, and ten in another vessel.

CUMIN.—*Morocco* seed remains neglected, and is obtainable at low prices. *Malta* seed, however, is scarce and dear, particularly for good quality.

DAMIANA-LEAVES.—In New York there is scarcely any stock left, and the new crop is not due till January. Meanwhile from $9\frac{1}{2}d.$ to $12d.$ per lb. is quoted for common to fine green, and much higher prices are likely to prevail before long.

ERGOT OF RYE.—The market is still irregular, but the general opinion appears to be that there is a fair prospect of an early and strongly-marked turn for higher prices. There are sellers of good *Spanish* at 2s. 6d. per lb., and of old *German* and *Belgian* at 2s. 2d. per lb. on the spot. Some new crop *Russian* ergot, we hear, is being offered at 2s. 6d. per lb., c.i.f. from Odessa, shipment any time up to November.

GLYCERINE.—Prices are still falling, and the makers agents now offer double-distilled (German), S.G. 1,260, at 44s. per cwt., perhaps 43s. for quantities.

GUM ARABIC.—Although genuine Soudan sorts are now coming in more freely in Liverpool, holders are disposed to be firm. From 77s. 6d. to 85s. per cwt. has been paid. *Senegal* gum has sold in Liverpool at 55s. per cwt., but for delivery sellers would be willing to make a reduction in price. For *Brown Barbary* 40s. has been accepted, and in *Niger* arabic business is dull.

HONEY.—It is said that the new crop of *Californian* honey, which is now being shipped from San Francisco, is of exceptionally fine quality, but not very large. Choice white new season is offered at 44s. c.i.f. from New York, or 39s. c.i.f. (Sailer) from San Francisco.

INDIGO.—Estimates of the new season's indigo crop in British India place the output in Lower Bengal at 14,000 maunds, against 30,814 maunds in 1891. This result, it is said, is almost the worst on record. The Behar crop is not likely to be more than half of that of 1891, the North-West will be about the same, and the Benares yield may show a slight excess.

IPECACUANHA.—It is said that there are no sellers now at "any reasonable rates"; 7s. per lb. may still procure a barely fair seron or two of *Rio* root, but most of those who have anything to sell want 7s. 6d. per lb. Our stock of *Cartagena* is nearly all owned by one holder, and he asks 6s. per lb.

JABORANDI-LEAVES.—Good green leaves are scarcely to be had. *Pilocarpine* has been raised to 44s. per oz. by manufacturers.

JUNIPER BERRIES.—The new season has opened in Italy at very low prices—viz, 5s. per cwt., f.o.b. Leghorn, and business has been done at these quotations. The cause of the present low range of prices lies partly in the fact that France, where large quantities of this article formerly found an outlet, is now closed against the drug by a prohibitory duty.

LIME-JUICE.—The arrivals of lime-juice from the West Indies remain rather heavy, over 120 puncheons having been received this week. There are at present sellers, but no buyers, of fair quality at 1s. 4d. per gallon on the spot.

OIL (CASTOR).—Italian oil is offered at 36s. 3d. per cwt., f.o.b. Leghorn, for extra *flore* tasteless Italian; and at 33s. 3d. per cwt., f.o.b., for extra *flore* water-white, September October steamer shipment. "A fair business" (says a Calcutta correspondent, writing on August 16) "has been done at a slight decline, the market closing firmer."

OILS (ESSENTIAL).—Oil of *Star anise* is a little cheaper, business having been put through at 5s. 5d. per lb. c.i.f. for arrival, a price which was recently refused. The crop of *Rosemary* in Spain has been a good one, and the price is now low—3s. per lb.—while Dalmatian oil may be had at 1s. 4 $\frac{1}{2}$ d. to 1s. 10d. per lb. according to quality. The prices of French oil of *Lavender* and *Spike* are rising, the news of the almost total loss of the crop, which we gave several weeks ago, being fully confirmed. *Turkish* geranium oil is dearer, and held for 10s. per lb.; for foreign oil of *Coriander*, 19s. per lb. would be taken (which is lower), and oil of *Cubels* has followed, to some extent, the decline of the raw material, and is offering at 19s. per lb. For French oil of *Pennyroyal* 3s. 6d. per lb. is now wanted, and in America hardly any is to be had at present. The price quoted from New York is 10s. 6d. per lb. English-drawn *Sandal-wood* oil may be had at lower prices—viz., 15s. 6d. per lb. English-drawn *Dillseed* oil has been reduced in price.

OIL (OLIVE).—We hear from Leghorn that that market keeps very firm on account of the damage done to the growing crop. At present there is not much demand, but higher rates are generally expected as the season proceeds.

OIL (PEPPERMINT).—There has been a good deal of business done this week in American (HGH) oil for arrival at 12s. per lb., c.i.f. terms. On the spot the market showed a tendency to greater firmness early this week, when 13s. per lb. was the quotation; but the tone is now decidedly easier, and there are sellers (but no buyers to-day) at 12s. 9d. per lb. Messrs. Schoellkopf, Hartford & MacLagan write from New York, under date of August 25:—"The new crop is now being distilled. In Wayne co. it will be above the average, and in quality will be very fine. In Michigan, where the great bulk of the oil is produced, the crop will fall short of last year, but not to any great extent. As to quality, it will also be superior, for, as Japan oil is practically shut out by the duty of 3s. 4d. per lb., this season's oil from Michigan will be much purer than Michigan oil used to be. In fact, this year it will be a difficult matter to distinguish Wayne co. from Michigan oil. As to price, we firmly believe that no

decline from quotations lately ruling would have been seen had it not been for the large speculator, who used to be the great 'bear,' but who for the past two years has been a 'bull,' and tried to control and 'corner' the HGH brand, turning 'bear' again this week, and sacrificing his large holdings of Hothchis at from 11s. 6d. down to 11s. The forcing on the market of from 500 to 800 cases of HGH has, of course, completely demoralised the position; and at present there is no knowing what the result will be. Lower prices, however, seem inevitable."

OPIUM.—This has been a very quiet week for opium so far as the London market is concerned, and the only business reported in *Turkey* is a little soft shipping at prices ranging up to 8s. 6d. per lb. There are also some few orders for druggists' opium about, but they have not yet been executed. *Persian* is very difficult to obtain, and holders have raised their prices in some instances to 10s. per lb. for fine quality. A Smyrna letter of September 3, which comes to hand as we go to press, says that the purchases for account of the Dutch Government are expected to commence in a few days, and the large holders hope that prices will then advance. The course of the Smyrna opium market during the month of August is thus described:—"With an active trade prices have advanced from 5d. to 6d. per lb. during the month. This rise originated in speculative and obligatory purchases, but was afterwards maintained by direct orders, owing to the improved position of the drug in the consuming markets. During the second half of the month, however, there has been less business doing; and although our dealers are still very tenacious, some small holders have consented to a reduction of 1d. per pound on last week's prices, which were for new Yerli opium 7s. 6d. per lb.; Karahissar, 7s. 2d. per lb.; Yerli talequale, 7s. per lb.; current ditto, 6s. 8d. per lb.; slightly ditto, 6s. 9d. per lb.; and old selected ditto, 6s. 9d. per lb. (all prices f.o.b., and loss in weight included). Should buyers continue to keep off a few days longer, the price may recede another penny or two on these quotations."

ORRIS.—We hear from L'ghorn, under date of September 3, that "the position of the market is unchanged, sellers and buyers being unable to come to terms; but we are still of opinion that the former must give way, and think that next week business will be practicable." Owners of new-crop root, which is just about to come to market now, are asking high prices; but until business has actually taken place the position remains very uncertain. The Verona crop is said to be small this season.

QUICKSILVER.—Remains fairly steady without much alteration at 6l. 7s. 6d. per bottle from the importers and 6l. 6s. in the second-hand.

QUININE.—There is not much trade passing on the spot, and though one hears daily of business having been done, it is impossible to trace most of these so-called sales. For German bulk in second hand 9½d. per oz. has been paid on the spot, and 9¾d. for December delivery, while for January 10d. per oz. is asked. The manufacturers' prices are unchanged.

RHUBARB is still arriving much in excess of the requirements. This week's imports amounted to 123 cases.

SALICINE.—Rather lower, and dull of sale.

SCAMMONY-ROOT.—A parcel of 30 bales sold in Liverpool lately at 27s. 6d. per cwt.

SHELLAC.—The spot and speculative markets have been firm, with only a little business however. Orange lac has been sold at 83s. 6d. for September TN, and 84s. 6d. for October TN, with buyers rather than sellers at those figures. Auction on Tuesday 1,323 cases were offered, of which 790 sold, (two-thirds "without reserve") with excellent competition at steady prices for second orange. Fine orange was somewhat irregular; but on dull and sluggish of sale. The following prices were paid:—ASSL orange, fair pale but cakey, 86s. to 89s. per cwt.; second orange, unworked fair to good pale flat, 81s. to 84s.; broken livery to fair flat reddish, 79s. to 82s.; ordinary first button, 90s.; good seconds, 87s. to 88s.; resinous thirds and blocky fourths from 74s. to 40s. per cwt. Since the sales there has been a good private demand for garnet AC, of which 200 cases have been sold at 75s. per cwt. cash terms. Button lac has sold for arrival,

near at hand, and September-October shipment at 8s. per cwt. c.i.f. terms, and for TN November and December delivery 84s. 6d. has been paid.

SILVER NITRATE.—Steady at 2s. 1½d. per oz. for pure.

SODA ACETATE firm and scarce for immediate delivery, although offering at somewhat lower rates for future shipment; on the spot 18l. 5s. has been paid.

SPERMACETI.—American refined has been sold at 1s. per lb.

SUGAR OF MILK is lower. White crystals or powder 68s. 6d. per cwt.

TEA.—The China market is a dragging one and there but little fresh to report. Dealers find the country demand very slow, and retailers appear to be using Congous more and more sparingly in their blends. P'angongs under 10s. are very cheap, and ought to sell readily enough, but they are out of fashion, and it looks as if there would be a surplus of almost all but finest Congous this year. Assams are firmer for lower grades, and the terminal market has advanced several points. In sale there has been good competition for common Assams and Ceylons alike, and a distinctly better tone. Fine Assam Pekoes are cheaper, but any stand-out liquoring broken Assam and Ceylon Pekoes are wanted and very firm.

TONQUIN BEANS.—In London the market is quiet, and bold black *Angosturas* are offering at 6s. to 6s. 2d. per lb., while *Pardis* are quoted at 1s. 3d. to 1s. 9d. for ordinary for mixed; and at 2s. to 2s. 9d. for fair black to fine frost. About August 20, eight tons of new crop *Angostura* beans arrived in New York and were all sold; it is said, at the parity of 10s. per lb. to local consumers. The new crop is due in the course of the present month, meanwhile holders are firm at 2s. 10½d. c.i.f. for frosted, and 1s. 9d. per lb. for ordinary black beans.

TURMERIC.—There have been small sales of *Bengal* fine at 20s., and of fair bulby mixed *China* at 18s. per cwt.

VANILLA.—Reports from Mauritius say that there was stock left in the island on August 11, and add that "the article will be very scarce this year."

WAX (CARNAUBA).—Yellowish wax is reported to have been sold at 50s. per cwt. in Liverpool.

WAX (JAPAN).—There are now sellers of good pale square at 37s. per cwt.

Thursday's Market News.

42 CANNON STREET, E.C., September 6.

London. Business has been fairly brisk this week, but without any such sudden alterations in price as signalled the last days of August. The advance in distillates is still fairly well maintained, but signs are not wanting that it will be of short duration. Chlorate of potash has suddenly experienced a strong run, due to the discovery that supplies had run very short. Citric acid is still firmer, and so is quinine. Permanganate of potash and carbolic acid maintain their advance. Bleaching-powder is even a little dearer still. Soda of milk is rather cheaper, and we notice that among the minor chemicals the following have recently undergone price-modifications in the manufacturers' lists:—High pitch, pilocarpine, veratrine, thymol crystals, all lithium preparations, antimon. tart and hydrokinone. Lower: Soda hyposulph., crude antimony, amyl nitrate, benzoate of ammonium, barium nitrate, bromide of sodium, sulphonal, acetanilid and chloride of zinc. Methyl. ether is also lower. In drugs the principal alterations are in camphor, which is again a little higher in some positions, though lower in others; ipecac, which has further advanced, and peppermint oil (HGH), which a large business has been done. Cinchona has slightly improved in value. Manna is likely to be at famine prices. Chamomiles and saffron are dearer, and so are cascara, sagrada and damiana-leaves. New valerian-root is offering at lower rates. Lime-juice is dull and easier. In essential oils, star-anise, coriander, and cubeb oils are lower, pennyroyal, lavender, Turkish geranium, and lemon higher,

price. In outside articles there is little change. Gambier is dearer, shellac fairly steady, pepper, chillies, soy, and cocoa butter higher. Arabic gums are irregular, and mostly easier. Nutmegs and mace are lower. Gnm olibanum, sulphate of copper, linseed oil, rape oil, and cotton oil are also easier.

The Bank rate keeps unaltered at 2 per cent. Bar silver is worth 33½d. per oz. to-day. The Bombay exchange is 1s. 2½d.; Calcutta, 1s. 2½d.; and Shanghai, 3s. 9½d.

Liverpool. We are informed by our Liverpool correspondent that the advance in canary-seed has been temporarily arrested. Bleach is running up nimbly, and seems likely to become dearer still. All Sierra Leone chillies have been cleared off the market. Quillaia is still coming in, and shows no improvement in value. Guinea grains are also lower, with fresh arrivals. Chlorate of potash is dearer, and only obtainable in second-hands now. Castor oil keeps dull, and beeswax remains firm.

New York. Our New York correspondent, writing under date of August 31, states that the tone of the market is good, and that there is a general upward tendency in drugs and chemicals, which in several lines finds expression in slight advances. The cholera scare has caused some of the *Carbolic-acid* dealers to decline orders for the present on the ruling basis, which has advanced to 13c. in drums, in anticipation of an unusually heavy demand. This expectation is justified by the preliminary circular of warning and instructions promulgated this morning by the City Board of Health. In these instructions carbolic acid is the only disinfectant mentioned, to the great disappointment, no doubt, of the agents of the various proprietary disinfectants. Lysol, by the way, has had quite a good reading notice in the way of a cable from Vienna quoting the Austrian Board of Health as giving a most favourable report as to its value in cholera. The cable appeared in several of the dailies. *Peppermint oil* forms the most striking exception to the generally firm tone of the market, and is unsettled, at \$250 for HGH \$230, for Wayne county bulk, and \$215 for Western bulk. The tendency of the market, however, is rather towards firmness, and the tone is somewhat better than at last writing. *Sassafras oil* is scarce, and hardly obtainable, at 38c. Prime grades of *sengga* are held in the country at about 30½c., equal to 32c. spot; and here 32c. to 37c. is quoted, but no business reported. *Mexican sarsaparilla* continues scarce and firm, at 16c. to 17c. *Golden seal* is quiet, at 23c. *Jalap* is jobbing at 33c. to 35c., with no export business reported. *Balsam tolu* is in good supply, and the demand exceedingly limited. The last sales from first hands were at 22½c. The European *flower crops* are engaging attention, and the usual bull reports are being actively circulated. *Angostura tonquin beans* are reported in first hands, though it is related in some quarters that about 30,000 lbs. are still at primary sources and will come forward. On the spot jobbing lots fetch \$225 to \$250, according to holder and quality. *Vanilla beans* are active in a jobbing way at steady values. *Opium* is in good demand, with sales this week of about 30 cases at \$162½ to \$165, and the market has strengthened to \$165 as bottom. This week some 60,000 oz. of foreign *Quinine* has sold at 18½c. to 18¾c. in bulk. *Nitrate of silver* has declined to 53c. to 54½c. *Quick liver* is easier, with sellers at 54c. *Cubeb-oil* declined to \$325. *Shellac* is moving better at improved prices. *Ipecac* is slightly firmer at \$160. *Celery-seed* is offering to arrive at 8½c.; spot stocks are limited, and 17c. is asked. Russian products are generally very firm in tone. The market is reported to be practically bare of Russian *Cantharides*, which are nominally quoted at 85c. to 90c. per lb. About 1,500 lbs. of German *Ergot of rye* have sold at 55c. per lb.; Spanish is held at 60c. to 70c. per lb. *Lycopodium* has been sold at 41½c., since when an offer of 42c. has been refused. *Citric acid* has been reduced ½c. per lb. by the makers. *Cream of tartar* is unsettled owing to competition between the domestic manufacturers. *Spermaceti* has advanced 1c. per lb. and is now held for 32c. to 33c. for block, and 33c. to 34c. for cake.

ACID (CARBOLIC) is still as scarce as ever on the spot, and for 95 to 98 per cent liquid acid from 2s. 3d. to 2s. 6d. is the quotation; one maker, we believe, has been as high as 2s. 9d., but has since come down a little; for early delivery, however, it is possible to buy at 2s. Crystals, 39° to 40°, are

quoted at 6¼d. to 6½d.; 31° to 35°, for immediate delivery, at 5½d., which is slightly dearer.

ACID (TARTARIC).—The market remains very dull at 12½d. for English B.P. acid; and from 11¼d. to 11½d. for other qualities in second-hand.

BLEACHING-POWDER is still very scarce on the spot, at 10½. 5s. to 10½. 10s. per ton in casks. In Liverpool to-day's quotation is 9½. 15s. f.o.b., at which business is said to have been done.

CAMPHOR (CRUDE).—The market is firm but quiet on the spot, 14s. being asked for Japan and 12s. 6d. for ditto August-September shipment. China camphor on the spot has advanced to 140s., and for early arrival 122s. 6d. c.i.f. is quoted, which is rather lower.

CAMPHOR (REFINED).—The German agents will still sell at 1s. 6½d. per lb. net, to-day, but they say that they are not sure that that will be the price to-morrow.

CHAMOMILES.—Belgian flowers have advanced in price. For finest quality of the current crop 67s. 6d. per cwt. is now asked (3s. more than last week), and for ordinary dark to fair quality from 50s. to 55s. per cwt.

CHILLIES are firm, with more inquiry. Common *Zanzibars* have sold privately at 35s. per cwt.

CHLORATE OF POTASH.—There has been quite a rush of orders, and purchases especially for American account have been very heavy. On the spot 7d. has been paid here and 7½d. is now wanted; in Liverpool sales have also been made at 6½d. per lb., f.o.b. Liverpool, from now up till the end of the year. The manufacturers are said to be over-sold, and to-day 7d., f.o.b., Liverpool is asked.

CREAM OF TARTAR.—Dull at 85s. for powder and 83s. 6d. per cwt. for best white French crystals.

CUMIN-SEED.—A considerable quantity of Malta seed sold last week at 42s. 6d., and since then 45s. has been paid. It is expected that prices will rise further.

GALLS.—China galls have sold at 52s. 6d. per cwt. on the spot for fair quality.

GUM ARABIC.—At to-day's auctions very large quantities were offered. The demand for East Indian gums was rather poor except for siftings, which sold well, while Ghatti gum was also steady. Common to fair soft Cawnpore Amrad drop brought from 29s. to 32s.; ordinary red to fine pale Kurra-chee, 32s. 6d. to 60s.; common to good pale siftings from 21s. to 30s. Ghatti sold at from 20s. 6d. to 53s. for common and dark to fine pale. Australian gum brought from 19s. to 30s. 6d. for common dark to good frosted red; small to good soft bold ambery mixed and pale Cape gum sold at from 43s. to 57s., and good to fine siftings at 35s. to 42s.; very good clean amber Mogadore sorts realised only 75s. to-day, which is rather easier; brown Barbary is worth from 47s. to 52s. for good to fine quality. Genuine Soudan sorts of new import are now offering at 75s. per cwt., but it is expected that that price will hardly be maintained, as there are said to be large quantities on the way to this country, and about 1,200 packages have recently arrived in Trieste.

IPECACUANHA.—Rio root does not seem to be quite so firm to-day. Sales have been made at 7s. 2d. to 7s. 3d. per lb. for fair stout, but there are now sellers at 7s. per lb. for fair quality. For fine plump *Cartagena* root 6s. per lb. is said to have been paid, which is comparatively a very high price.

MANNA.—We hear that the new crop has not yet arrived on the market in Italy, and what there is of it is not expected until the middle of September. The rains have spoiled the greater part of the harvest, and the *Gerace* manna is an entire failure. The weather is still said to be very rainy, and this leaves little hope that anything will be saved. Quotations are mostly nominal; one firm here quotes from 24½. 10s. per cwt. c.i.f. terms, for bold new manna.

MERCURIALS.—There has been no change in the price. Vermilion is now quoted at from 2s. 2d. to 2s. 4d., according to quantity.

OILS (ESSENTIAL).—Star-anise oil has sold at 6s. per lb. on the spot and at 5s. 5d. per lb. c.i.f. to arrive. The last

available lot of French *Pennyroyal* oil on the spot has been sold at 5s. 6d. per lb. Italian oils are dearer; for *Bergamot* 10s. f.o.b. was the last price paid. In *Lemon* a very fair business has been done, and now the increased price of 9s. per lb. f.o.b. is asked. *Menthol* keeps steady at 9s. 9d. to 10s. per lb. Further sales of about 50 cases *HGH Peppermint* oil, at 12s. landed terms, for shipment, are reported to-day. Wayne County sells at 10s. 3d. per lb. in London. English oil of peppermint is easier. The season opened at 32s., but from 29s. to 30s. per lb. would buy now. *Lavender*, however, is very dear, and holders ask from 52s. to 55s. per lb. for it. French lavender is a very small crop this season.

PERMANGANATE OF POTASH continues to be exceedingly scarce on the spot, and those who cannot wait must (and do) pay 85s. for small and 90s. for large crystals, to second-hand holders. But the combination agents are hurrying forward supplies at 75s. to 80s. (for 10-cwt. lots) for small and large crystals, and when these arrive the second-hand people's innings will be cut short.

QUICKSILVER is slow of sale at 6l. 7s. 6d. from the importers, and 6l. 6s. in second-hands.

SAFFRON has gone up to 26s. 6d. or 27s. 6d. per lb. for good *Valencia*, 25s. to 26s. per lb. for second quality, and 18s. per lb. for *Alicante*. The agents say that they expect a further advance of at least 50 per cent. before the end of the year, as the acreage planted this year has been much smaller than in 1891.

SOY.—China is a little firmer privately, and 1s. 3d. per gallon has been paid on the spot.

VALERIAN-ROOT.—For old root as much as 58s. 6d. per cwt. has lately been paid, and there is now no more to be had. The new crop is offering at from 37s. 6d. to 38s. 6d. for delivery at the end of this month, and at 34s. for delivery at the end of October. The harvest is said to be a small one, and prices are not expected to fall below the opening rates.

THE LIVERPOOL MARKET.

BLEACHING-POWDER.—In consequence of the active demand the makers have advanced the price almost daily, and now 9l. 10s. is asked in softwood casks. There is every prospect of higher prices.

CANARY-SEED.—There is a temporary lull in the advance in this article, but 82s. 6d. to 85s. is still the value of good bright seed, both *Spanish* and *Turkish*. A parcel of 117 bags of *River Plate* offered at auction to-day, and failed to get even a bid in consequence of its unsatisfactory condition.

CHLORATE OF POTASH.—This has steadily advanced during the week, and now only second-hand parcels are to be obtained at 7d.

COLOCYNTH.—A parcel of fine bold apples has been sold at 1s. per cwt.

OIL (CASTOR).—This is still flat, and moves off slowly at 2 $\frac{3}{4}$ d. to 2 $\frac{7}{16}$ d. for good seconds Calcutta, while 2 $\frac{1}{2}$ d. to 2 $\frac{3}{16}$ d. is asked for first pressure French.

GUINEA GRAINS continue to arrive steadily, and as low as 20s. has been accepted for a small lot of good seeds.

QUILLATA.—There have been further arrivals, and value of good thin bark ranges from 16l. to 16l. 10s.

WAX (BEES).—*Chilian* remains firm at 7l. to 7l. 10s. for yellow, and 6l. 10s. to 6l. 15s. for grey. A small parcel of fine yellow *Brazilian* offers at 7l. 2s. 6d.

THE SMYRNA OPIUM MARKET.

(Telegram from our Correspondent.)

SMYRNA, September 7.

CONTRARY to general expectation, our market has been well sustained this week. Manufacturers' agents have bought 30 cases, for which they have been obliged to pay full prices—viz., the parity of 6s. 5d. per lb., f.o.b., for ordinary kind of old manufacturing talequale, and 6s. 4d. per lb., f.o.b., for new crop ditto.

LONDON DRUG STATISTICS.

The following figures refer to the stocks of drugs in the port of London on August 31, 1892 and 1891, and to the imports and deliveries during the first eight months of the years 1892 and 1891.

Article	Stocks		Imported		Delivered	
	1892	1891	1892	1891	1892	1891
Aloes ..os & pkgs	6,432	7,476	2,009	1,453	2,679	3,717
" ..gourds	1,077	1,249	—	315	23	241
Anise, star. ....hts	197	98	304	425	149	374
Arrowroot ....oks	7,408	6,312	13,708	10,747	9,223	11,313
" ..bxs & tins	417	1,575	1,395	680	1,931	1,243
Balsams ..oks, &c.	1,853	2,243	1,063	1,129	764	1,043
Bark (Cinchona), S.American cases	58	333	27	21	341	46
" ..bls, &c.	25,183	25,953	8,735	7,831	10,043	8,065
E.I., Ceylon, and Java	256	319	215	486	247	450
" ..bls, &c.	18,484	24,447	24,310	30,237	27,838	30,063
Borax	261	261	—	55	—	55
Calumba	713	715	530	123	464	717
Camphor	3,395	5,611	5,153	7,344	6,089	7,333
Cardamoms ..hts	679	470	2,148	1,393	1,911	1,541
Coco. Ind. bgs, &c.	1,032	552	1,093	433	556	15
Cream of Tartar oks	10	16	5	16	5	2
Cubebs	65	90	297	106	316	25
Cutch	2,976	2,879	2,422	1,665	1,815	1,700
Dragon's Blood chts	123	110	236	129	176	111
Galls, China	1,715	2,266	1,994	1,231	1,903	1,583
Trky & Prsn. ....ks	3,303	4,064	3,125	8,010	2,110	7,444
Gambier	602	969	7,487	6,432	8,379	6,373
Gums—						
Ammoniac pkgs	213	49	273	15	142	2
Animi & Copal pkgs	10,633	6,252	15,261	8,123	10,550	11,333
Arabic	11,771	15,915	13,543	16,538	19,094	17,053
Asafetida ..	339	396	276	33	457	17
Benzoin	2,481	3,072	1,760	2,390	2,326	2,233
Damar	4,109	5,042	3,057	2,693	3,223	4,233
Galbanum ..	31	34	—	29	6	3
Gamboge ..	187	42	380	170	208	15
Guaiaoum ..	242	165	166	341	51	20
Kino	7	10	10	14	20	3
Kowrie	1,350	1,160	2,544	2,422	2,039	1,983
Mastic	14	32	—	40	17	2
Myrrh	232	441	173	531	336	51
Olibanum ..	5,211	6,175	6,823	6,711	5,810	4,933
Sandara ..	1,061	491	1,444	1,057	817	76
Tragacanth ..	2,358	4,928	3,910	4,556	5,237	5,013
Guttapercha	2,746	2,513	1,481	1,792	1,334	1,333
*Indiarubber, E.I.,	252	362	550	790	873	63
Madagascar ..	151	122	243	221	205	15
S. American ..	83	83	184	164	152	1
African, &c.	195	231	265	301	305	23
Ipeoc. ....oks & bgs	295	275	1,441	787	1,161	70
Jalap	35	72	317	179	319	2
Lac Dye	4,903	5,032	—	—	67	—
Nux Vomica pkgs	1,633	632	3,043	1,241	1,875	1,133
Oils—						
Castor	118	137	422	530	379	50
"	2,171	3,294	2,318	5,755	3,544	4,333
Cococa-nut	1,639	2,478	2,361	4,667	2,703	3,3
Olive	1,267	1,213	2,117	3,351	1,624	2,7
Palm	3	3	56	34	71	—
Rhubarb	608	503	1,060	623	859	9
Safflower	136	273	25	—	135	—
Sarsaparilla	361	190	826	648	794	7
Senna	1,710	2,336	1,234	1,631	2,378	2,7
Shellac, Orange						
"	27,097	25,740	20,365	17,267	20,529	27,5
Garnet ..	7,017	3,125	11,623	5,443	6,533	6,3
Butt-on ..	5,531	6,185	5,635	3,155	6,742	7,4
Total chts, &c.	39,695	35,052	33,324	33,868	33,810	41,3
Sticklac chts, &c.	280	623	555	200	626	1,8
Turmeric, Beng.	64	710	13	—	399	4
Madras, &c.	297	151	511	49	331	3
Total	361	861	529	49	730	8
Vermilion, chts, &c.	53	23	53	100	26	1
Wax, bees'						
"	1,831	1,505	3,372	2,540	2,333	1,8
"	1,465	830	2,030	1,144	1,526	1,1
"	42	14	23	6	—	—
" Japan .. pkgs	538	464	725	76	749	7

* Liverpool stock: Para 582 tons, other sorts 814 tons; total 1,396 against 2,182 tons last year and 503 tons in 1890.



Memoranda for Correspondents.

Always send your proper name and address: we do not publish them unless you wish; if you do not, please use a distinctive nom-de-plume.

Write on one side of the paper only; and devote a separate piece of paper to each query if you ask more than one, or if you are writing about other matters at the same time.

If you send us newspapers, please mark what you wish us to read.

Ask us anything of pharmaceutical interest: we shall do our best to reply.

Before writing for formulae consult the last volume, if you have it.

Letters, queries, &c., will be attended to in the order received.

Opium Questions.

SIR,—Permit me to correct a very obvious error in my letter of last week. The last line should read—

“Marc contained 16 per cent. of morphia.”

It is clear that the total alkaloidal content must be the sum of the weight actually obtained and of that assumed to have been carried off in solution.

Yours very obediently,

Dover, Sept. 2.

J. F. BROWN.

SIR,—In your issue of August 27 Mr. Linford and Mr. J. C. Umney both give their views on tr. opii B.P., and from their letters I gather that the sole object to be aimed at is the correct percentage of morphine which the tincture ought to contain—granting that the process used shall thoroughly and completely exhaust the marc. If the morphine percentage is the only consideration, have we not liq. morph. hydroch. of a definite alkaloidal strength?

But does not the therapeutic value of tr. opii depend in no inconsiderable measure on the other constituents of the gum? This being so, I venture to suggest that we are not justified in curtailing the quantity of opium or in augmenting that of proof spirit simply to adjust the strength of morphine to 75 per cent. The process I usually follow for the exhaustion of the opium is essentially the same as that used by Mr. Linford, but instead of adjusting the strength after the tincture is made, I estimate the percentage of morphine in the dried opium, using as a diluent powdered opium of a very low morphine value (4 per cent. only), so that I have a powdered opium of 10 per cent. strength, and at the same time a tincture containing in full the other alkaloids and extractive matter of the B.P. quantity of gum opium.

G. F. MERSON.

20 West Grainger Street, Newcastle-on-Tyne.

“Molecule’s” Plan of Campaign.

SIR,—Will you kindly allow me a little more of your valuable space to correct an editorial misconception of the “Plan of Campaign,” as sketched in my letter of last week. To see ourselves as others see us is often a fearsome sight, and in your desire to be humorously critical you have credited me with ideas I never saw before, and which I did not intend my letter to convey. Perhaps I was not sufficiently lucid, but I distinctly said the “Association’s laboratories,” not the Pharmaceutical Society’s. Apparently connecting the scheme at all with the Society was its weak point. I expected, and even hoped, to be cauterised in your Correspondence columns. I fear your comments will deter any who may see a shade of feasibility in my suggestion from expressing their opinions. From personal experience and the perusal of many letters in your columns, I judge that the benighted vision of chemists leads them to reverse your dictum and say, “Bloomsbury Square simply sits still while chemists undertake the troublesome detail of supporting it.” This is not, however, exactly what I make out, and although I have lapsed into the gratuitous weakness of “writing to the papers,” I have not reached such a stage of doddering imbecility as to expect Blooms-

bury Square to make my living for me. Many years ago I saw some manuscripts in the handwriting of one of the most famous chemists of the early part of the century; these manuscripts displayed an enormous amount of thought and research, and they were all connected with the production of an infants’ food. This was not in my mind when I wrote my “Plan of Campaign,” nor has it ever occurred to me that Messrs. Dunstan and Dymond would descend to such investigations as occupied the mind of a chemist called Justus von Liebig. Thanks for your amusing banter; it taught me much, and while I learnt I laughed, but, reluctantly dropping my fancy for the benign smile of the Pharmaceutical Society, I am not yet convinced that my scheme is utterly foolish and ridiculous.

September 3.

MOLECULE. (107/32)

SIR,—I cordially agree with the suggestions of “Molecule,” and hope that he will not be discouraged by the playful remarks in your Editorial Comments on “Plans of Campaign,” but rather stimulated to further effort. Similar ideas have been in my mind for months past—in fact, so closely do his opinions correspond with my own in most respects, that some chemists with whom I have conversed on the subject would be inclined to credit me with writing the letter.

One point he has not noticed which should not be lost sight of—namely, that the loss of public confidence from which the chemist of to-day suffers is, to a large extent, due to the offensive and contemptuous manner in which many of the patent-medicine manufacturers, in advertising their goods, caution the public against purchasing spurious imitations offered by unprincipled vendors.

I would suggest that the plan he has sketched could be better carried into operation as a limited liability concern than as a branch of the Pharmaceutical Society. Any undertaking of the kind would have the moral support of the Society, and probably the active assistance of some of its most prominent members, but it would have a greater chance of success if worked by a separate body.

Fancy a series of proprietary articles—sound preparations and fair value—advertised by the Association and simultaneously pushed by 25 per cent. of the chemists (themselves the joint proprietors) in the United Kingdom, and offered at the same price everywhere! Could the medicines fail to sell? If a company with such objects in view were formed I would subscribe to the share capital. Some of “Lymph’s” proposals, such as the supplying of drugs and sundries to shareholders, could be advantageously worked in—not, of course, his scheme for devoting a portion of the profits to founding a fund for opposing the action of the Inland Revenue authorities. That would be in the last degree impolitic. Such action, though at times irritating, is in the main salutary, and helps make us sharp.

Yours faithfully,

E. LOVELY.

A New Method for the Estimation of Grape Sugar.

SIR,—Permit me to correct an error into which I inadvertently fell in communicating to your representative the formulæ for the above test. Formula No. 1 should read 69.30 grms. of copper sulphate instead of 34.65 grms., or just double the amount.

The error arose through supposing that taking half the water (500 c.c.) used in making 1,000 c.c. of Fehling’s solution and dissolving in it the 34.65 grms. of copper sulphate was the same thing as doubling the copper salt. A little reflection, however, soon makes it evident that such is not the case, for the 500 of product has to be diluted with a further 500 of the alkaline solutions, which reduces it at once to the ordinary strength of Fehling’s solution. I am sorry to have made this slip, and hope it has not misled any of your subscribers.

I remain, dear Sir,

Yours truly,

A. W. GERRARD.

North London or University College Hospital,
London, W.C., Sept. 7.

The Irish Examiner in Pharmacy.

SIR,—A fortnight ago a query appeared in your journal, over the signature “M.P.S.I.,” asking the Registrar of the Pharmaceutical Society of Ireland whether he had

accepted an application for the post of examiner from Mr. T. W. Robinson whilst that gentleman was still Vice-President of the Society.

Your last issue did not contain the required information from Mr. Ferrall, but Mr. McCormack, ignoring the real question at issue, writes to say "it did not matter so long as his letter of resignation was on the agenda, also his application for examiner."

It seems to have escaped Mr. McCormack's usually acute understanding that a man cannot legally have his application for an office and his resignation of a position incompatible with that office on the same agenda-paper, as the application may not be received or considered until the resignation is formally accepted.

I contend that this admirable rule, which provides that members of Council shall not be eligible for election as examiners, was expressly framed to prevent such appointments as that of Mr. Robinson. In order to preserve the reputation of the Society, the confidence of the public, and the respect of the profession, it is essential that a person elected examiner shall be one about whose qualifications there can be no question, and whose selection is due rather to the super-eminence of his abilities than the partiality of his colleagues.

There seems to be a strange reticence about giving the names of the seven other candidates for the post for which Mr. Robinson was, we are told, unanimously chosen. Can Mr. Ferrall see any objection to letting members know who are these gentlemen who were so completely eclipsed by the effulgence of that "practical knowledge of pharmacy" which Mr. McCormack claims for his friend Mr. Robinson?

Yours sincerely,

19 North Earl Street, JAMES C. MCWALTER.
Dublin, September 3.

The Irish Council Election.

108/33. "One Who Knows" writes to point out that the representatives of certain wholesale firms in Dublin and Belfast [who, we presume, are candidates for election] are seeking the votes of unwary chemists and druggists for their own purposes. This is an accusation which might be levelled at most candidates in most elections; and as our correspondent does not give us the names of the persons whom he is accusing, we must decline to print his letter. For the benefit of unwary chemists and druggists, however, we may say that the pith of it is that these wholesale druggists who now pose as the representatives and champions of the druggists really injured the legitimate ones by creating, under the 1890 Act, by the inducements of their travellers, a considerable number out of publicans, provision-dealers, and other traders. If wholesalers are preferable to retailers, "One Who Knows" is able to point out at least half-a-dozen genuine wholesale drug houses in Dublin alone from which to pick candidates. He further relates that "when lately visiting a friend in a large country town, he required some Rochelle salts, and called at one of the newly registered druggists for it, but found they did not know of the existence of such a thing. The 'drug' assistant was busy sorting pigs' cheeks out of a barrel, and the same roof covered a public-house or general grog-shop."

Water-analysis.

SIR,—I must apologise for again trespassing on your space, but Mr. Wanklyn's letter in your last issue calls for some reply. I thank him for his courteous reply to my letter, but must remind him that 1878 is not 1893, and that Dr. Frankland's process is by no means universally rejected now. Why, the weekly reports on the metropolitan water-supply entail about 2,500 combustions annually. In my laboratory we perform about 1,200, not to mention many other chemists' work. No doubt the permanganate method does measure the albuminoid matter of germs, but it certainly does also measure varying amounts of nitrogen from all other sources. I cannot accept the statement that Frankland's process does not give an estimation of the true amount of nitrogen and carbon present, or, at least, so near the truth as to fall within the limits of careful experimental error, and I fear that although Mr. Wanklyn has demonstrated the impossi-

bility of this to his own satisfaction, he has not done very many of us. In conclusion, I only have to say that only one process can be employed I should prefer to Wanklyn's: the drawback to the combustion process is the sources of error are certainly many, and it will yield accurate results in the hands of a careful manipulator.

Yours, &c.,

10 Ascham Street.

ERNEST J. PARKES.

The Cholera-mixture.

SIR,—In your last issue you gave the Board of Health formula for diarrhoea-mixture. I find you give P. aromat. "Squire's Companion" states "pulv. aromat." understand latter to be synonymous with pulv. cin. comp. Which is the correct formula?

September 6.

JACQUE. (109/6)

[We have never seen the mixture made with anything than pulv. cretæ aromat., and we should think that is correct as the prescription was first published when that compound powder was known as "pulv. aromat." It was so given originally, but we generally give the modern title to powder in this connection.—ED. C. & D.]

Another Explosion.

What is there in this Lamplough's salt

To "go" without a warning?

I put the bottle ready wrapped

To send away this morning.

The squire declared for headache

"It's the only stuff" he trusted.

It's really most provoking

That it has gone and "busted."

Salop.

PILL-DRIVER.

It Pays to Read the Trade Reports.

A subscriber (103/57) writes from Burton-on-Trent: "Your occasional quotations of bird-seed (canary, hemp, &c.) would be a greater help if they appeared regularly. Through THE CHEMIST AND DRUGGIST I was enabled to buy canary seed at 36s. per qr., its very lowest. My harvest is now thanks to you."

Country Chemists' Charges.

SIR,—I had the following prescription to dispense week :—

Lin. belladon.	..	..	..	..	..	5j.
Lin. chloroform.	..	..	..	..	..	5j.
Lin. opii	..	..	..	..	..	5j.
M. Ft. liniment.						

When I handed it to my customer he told me he had only had it made up at a chemist's in a neighbouring town always paid 8d. for it, including bottle. I thought I was charging a very moderate price—viz., 1s. 6d. (as he seemed a poor man). I should be glad to know if it is usual to methylated liniments for dispensing.

Yours faithfully,

A PHARMACEUTICAL CHEMIST. (100/69)

DISPENSING NOTES

The opinions of practical readers are invited on subjects discussed under this heading.

Zinc chloride Injection

93/31. *Dum Spiro Fumo* wishes to know what appears to be the best form of this injection should present :—

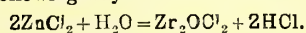
Zinci chloridi	..	..	..	..	gr. iv.
Aq. ad	..	..	..	..	3viij.
Ft. inject.					

He says certain dispensers send it out clear by using hydrochlor. Others filter it, and others, again, send it with the sediment and a shake-the-bottle label.

[This query ought to produce useful discussion, so as to result in uniformity in appearance. Of course, distilled water should be used. We think the correct method would be to dispense as written; at any rate, an indication should be noted on the prescription if any variation be made.]

The use of acid in certain cases has much to commend it, and should it have been a strong solution—say, about 40 grains to the ounce, sometimes prescribed for its caustic and antiseptic effect—the prescriber might be asked to sanction the addition of acid.

As to filtering, if it be wrong to add to a prescription, it is still worse to take from it any ingredient which may have a possible therapeutic effect; but it may be noted that in this case the chloride is supposed to react with water somewhat in the following way:—



If this does take place it is only to a very limited extent.]

A Translation.

96/38. *W. H.*—Your Italian prescription reads thus:—

	Grammes
Tinct. iodin.	10
Glycerini.	10
For external use.	
Polygala virginica (senega)	5
Make a decoction, strain to 125 grammes. Add—	
	Grammes
Tinct. cinchonæ.	10
Aq. flor. aurant.	25
Potass. acetat.	5

M. Ft. mist.

Take a tablespoonful every three hours. [Assume 30 grammes = 1 oz.]

Copaiba and Magnesia Pills.

98/52. *Puzzled* writes:—Would any of your readers say how these pills ought to be dispensed?—

Balsam copaibæ	m 228
Magn. carbonatis	gr. xvij.
M. Ft. mass. et divid. in pil. 66.	

[Use calcined magnesia rather than the carbonate, and, if time be an object, use 30 instead of 18 grains. Mix, and set aside for a few hours until the mass assumes a suitable consistence. The smaller the quantity of magnesia used the longer will it take. In the quantities given it would take fully twenty-four hours.]

Pil. Hydrarg. Subchlor. Co.

101/51. *Alvin* has made a batch of these pills recently, and finds that in the course of a few days they have become blue on the outside, while they retain their usual red colour inwardly. He wishes to know what chemical change has taken place? We should judge the change of colour was due to oxidation of the guaiacum resin; were they massed with castor oil as ordered in the Pharmacopœia, or was any powder containing sugar or starch used to roll them in?

An Explosive Mixture.

SIR,—A short time ago the following prescription was handed in:—

Sodii bborat.	3iv.
Hydratis chlorat.	3ij.
Atropinæ	gr. iv.
Spt. vini rect.	3j.
Aq. sambuci ad	3xij.

Ft. lotio.

It was duly sent out, and after two very hot days the customer returned with the bottle broken saying it had not been required and been placed on one side, but had in the evening burst with considerable violence, and wished to know the reason. The only explanation I could give was that chloroform had been formed by the action of borax on

chloral and the strong heat had caused this to burst the bottle—was this correct? J. F. K. (108/15.)

[That is very probably the explanation. Sometimes aqua sambuci ferments, but it is unlikely that it would in the presence of antiseptics like chloral and borax.]

An Effervescing Mixture.

SIR,—Will you kindly say how the following prescription should be dispensed?—

Magnes. sulph.	3j.
Pot. bromidi	3ij.
Tr. aurant.	3ij.
Liq. sacch.	3ij.
Sol. sal. efferves. ad	3viij.
M. 3j. t.d.s.	

J. H. M. (76/43.)

[Send the sodium bicarbonate of the usual saline mixture in powders.]

Bismuth and Tragacanth Mixture.

103/69. *Devon* dispensed the following prescription, which was returned in a few days as a solid glutinous mass, and he has noted in the "Art of Dispensing" that pulv. tragacanth. co. is generally free from this objection. He wishes an explanation, and to know whether by using bismuth. carb. he could prevent it becoming so thick:—

Bismuth. subnit.	3iss.
Pulv. tragacanth. co.	3ij.
Liq. morph. hydrochlor.	3ss.
Ac. hydrocyan. dil.	3ss.
Spt. chlorof.	3j.
Aq. ad	3viij.

Ft. mist.

[We have never noted this thickening to so great an extent, and fail to reproduce a mixture like "Devon's." Of course, if made up with hot water so as to rupture the starch-granules, it would be glutinous; or if, as is possible, the customer had thoughtlessly put the bottle in a warm place or in warm water, the same thing might occur. After making up the mixture we heated some of it, when it became quite a jelly. It has frequently been pointed out that bismuth mixtures made up with gums become slimy. How far the free nitric acid of bismuth subnitrate affects this has not been determined, and we should think that the property of heavy powders of removing amorphous substances from solution has more to do with the sliminess.]

LEGAL QUERIES.

Consult *Alpe's "Handy-book of Medicine-stamp Duty"* in regard to patent medicine questions.

General information regarding the laws affecting chemists and druggists is printed in *THE CHEMISTS' AND DRUGGISTS' DIARY*, 1882, pp. 161-5.

For stamp duties, licences, Customs regulations, &c., see the *DIARY*, pp. 161-9.

104/56. *W. F.*—The prescription of a medical man would not justify you in selling a preparation made with methylated spirit which you might not sell otherwise. The particular solution you name would not be likely to be allowed. At least, you should not supply it unless you had the consent of the Board.

106/49. *Perplexed*.—You are not correct in stating that the action against your unqualified assistant for selling poison, brought by the Pharmaceutical Society, is "an unheard-of proceeding." Since the liability was established in the High Court in the case of the Pharmaceutical Society v. Wheeldon, in 1890, penalties have been recovered from unqualified assistants in a considerable number of cases. You will have a fair defence if you can satisfy the Court that you were in the shop at the time the sale of the poison was made—that is, if you can show that in any sense you supervised the sale. It would be no defence to show that while the Pharmaceutical Council have been prosecuting

others, one of its own members was carrying on branch shops under the management of unqualified assistants; but it would be a proper thing to bring such a fact to the knowledge of the Court. We do not know if this conduct is still continued. The comments you ask for will be found in the issues of this journal on July 25, August 15, and November 14, 1891. If the case is proved against the assistant, the Judge has no power to reduce the penalty.

106/2. *Cymro*.—The articles you name, being preparations of corrosive sublimate, are, of course, poisons within the meaning of the Pharmacy Act.

108/45. *In Doubt*.—Chlorodyne, whether sold in large or small quantities, requires a poison-label. The question whether the name of the article or the name of the poison must appear is discussed in an Editorial Note. You may sell benzine in small quantities provided that you do not keep more than 3 gallons in all in stock, and that you keep that in separate glass, earthenware, or metal vessels, in quantities of not more than a pint in each, and each vessel securely stopped. There are no legal restrictions on the sale of bitter apple.

107/48. *Vinegar*.—We replied to a question similar to yours on September 5, 1891. There is a general order of the Board of Inland Revenue, dated June 26, 1889, providing that "the preparation of acetic acid for sale as vinegar by any means other than mere dilution with water, renders a vinegar-maker's licence necessary." This order is, so far as it goes, evidence of the recognition of the practice. But we do not think it goes very far. If you sell as "white-wine vinegar" a dilute pyroligneous acid, you should, we think, be liable to a fine under the Sale of Food and Drugs Act. The case would be less strong if you sold the article merely as "white vinegar."

109/21. *One in Doubt*.—The liability of your effervescent saline to medicine-stamp duty depends, in the view of the Board of Inland Revenue, on its composition. If it is made "the vehicle for the administration of doses of a medicinal drug upon the presence of which the character of the preparation mainly depends," the label you send would render it liable (see Alpe's "Handy Book," page 107).

109/29. *J. P.*—The liability of Gregory's powder to medicine-stamp duty depends on what is said on the label. In Alpe's "Handy Book," pages 74 and 75, specimens of liable and non-liable labels are given. The liable one recommends the medicine in cases of indigestion, &c. The name of the preparation being in the possessive case does not, in this instance, involve liability, because the formula is in the Pharmacopoeia.

109/28. *A. J. N.*—"Blank's Corn-solvent" would render the preparation liable to medicine-stamp duty. Liability may or may not be incurred by the directions. This is explained in Alpe's "Handy Book," page 92.

109/57. *Radix*.—Your label undoubtedly renders the mixture liable to medicine-stamp duty.

MISCELLANEOUS INQUIRIES.

Inquirers will please read the "Memoranda for Correspondents."

A list of "Books for Chemists" is given in THE CHEMISTS' AND DRUGGISTS' DIARY, p. 317.

For all particulars regarding Educational and Examinational matters refer to our issue of September 19, 1891.

Replies to queries are inserted according to the space open in any week, and insertion on any specific date cannot be guaranteed.

Back numbers of our weekly issue, containing formulæ, &c., occasionally referred to in answers, can be obtained from the Publisher at 4d. each.

107/73. *Ferrum*.—To Etch on Steel, the metal is covered with paraffin wax, the design made upon that, and the steel then dipped in dilute sulphuric acid.

101/10. *Smelling-bottle* wishes to know how to cure prevent the Development of a Mousey Odour in smelling bottles perfumed with lavender. He has used both lavender water and oil of lavender, and various samples of ammo and ammoniated alcohol. [We have never noticed the odour complained of: we should suggest the use of translucent ammonia and the addition of otto of rose or of rose-gerani oil to the perfume.]

104/23. *C. F. S.*—To render Drawing-paper Transparent you might try moistening it with a mixture of 1 part of linseed oil to 7 parts of turpentine or a solution of white of egg in water.

102/17. *A. S.*—We should recommend you to increase the quantity of carbolic acid in your tooth-powder 6 drachms, to reduce the white soap to 1 oz., and to keep the powder for some time in a wide-mouthed bottle or before putting up in boxes. You should also reduce the quantity of otto of rose to, say, 15 minims.

103/63. *I. W. C.*—As gum acacia is insoluble in spirit wine—is, in fact, precipitated from solution in water by addition of spirit—we cannot give you a formula for solution in spirit suitable for using upon musical instruments.

102/66. *J. L.*—Experience in regard to the irritant nature of Methylated Iodine Liniment is by no means isolated as you indicate—French and American, as well as English workers, having independently corroborated MacEwan. Your own observation, that "in some eight or nine shops in different parts of England and Scotland, I can only remember two samples which gave the irritant compounds," is very interesting.

104/53. *T. C. L.*—Oil of rhodium is very commonly used by rat-catchers as an attraction, but whether it is used or not at Ballarat we cannot say. The tales about the feats of rat-catchers should be taken *cum grano salis*.

104/48. *Acid. Tart.*—A weak brine—say, 2 oz. of salt to the pint of water—will keep Peas Green in Bottle. You may add a drachm of boric acid to the pint of preserved solution.

104/65. *W. McI.*—Sulphur Pastilles for Fumigation.—See THE CHEMIST AND DRUGGIST, June 6, 1892, page 812.

103/32. *Inquirer*.—The information will be found in Educational number.

98/57. *Heliotrope*.—You should have repeated your question. We do not remember it.

105/46. *Radix*.—See reply to "Heliotrope."

105/29. *Cetaceum*.—We must decline to make the analysis you ask for. It could not be of general interest.

103/11. *Ajax*.—For *Creme d'Amandes* see THE CHEMIST AND DRUGGIST, June 18, 1892, page 884.

108/20. *Yorkshireman*.—We cannot make room for correspondence such as you suggest, especially as, if it came, it would be too much of the nature of advertisement. You will find plenty of field for development if you will study our advertisements.

108/31. *A. D.*—We do not think it is quite fair to assist in the spoliation of makers of medicinal specialities by publishing formulæ for the imitation of their products.

106/15. *H. M. S.*—We think a good many platitudes and some sham sentiments are written and spoken about "cram"; but your defence of it on the ground that youths who want to qualify cannot afford to get a sound education is not good enough for publication in *THE CHEMIST AND DRUGGIST*. Such youths should get into some other business as fast as they can. And do you think it is quite manly to plead for "more scholarships"? On what ground do you demand that we, who are working for our own living, should go out of our way to provide funds to assist in the production of a superfluity of rivals?

108/15. *J. F. K.*—Milk of Magnesia.—We are not aware of any United States preparation which goes by this name. Probably Dalby's carminative is meant.

109/26. *Student of Irish Society.*—Letters written "in haste; please excuse blunders," letters written on both sides of the paper, and letters which only repeat what has been conveyed before, are not very likely to get inserted.

108/58. *Omega.*—Outdoor apprentices are generally taken for not less than three, and for not more than four, years. It is not usual to get a premium with them. For your other question refer back to Legal replies and Editorial, August 20 and 27.

100/33. *Foot-rot.*—We should not like to recommend Nitric Acid in Foot-rot. Have you tried your customer with solution of chloride of antimony or acid solution of nitrate of mercury?

103/74. *F. A. B.* thinks the B.P. process for Estimating Tincture of Opium "is rather too much trouble for a person in business who has not much spare time." Perhaps it is, so try the following modification of Mr. F. W. Fletcher's process (*THE CHEMIST AND DRUGGIST*, xxxiv. page 239):—Take zviiss. (about 400 fl. grains) of the tincture, and evaporate to about half the original bulk. To this add ammonia in excess and ziii. of acetic ether and ether (mixed), shake well, and after settling separate the ethereal layer. This contains all the alkaloids and a portion of the colouring-matter, and on evaporation on a water-bath the residue should weigh not less than $4\frac{1}{2}$ grains. The result will indicate the value of the tincture, and the morphia strength may be taken by inference.

98/74. *Wills.*—To render your Essence of Ginger, fortified with gingerin, serviceable as a soluble essence for aerated waters your easiest and simplest way is to make a solution of chloride of calcium (1 to 12) with water to about half the bulk of essence, and a solution of phosphate of soda (1 to 8) in the same quantity of water. Add first about half the calcium solution, then half the soda solution; allow the precipitate of phosphate of calcium to subside. Try a few drops of your clear essence in water; if it still clouds, then repeat the process with further quantities of the solutions until you obtain an essence which does not become opaque in water. This process takes out the resin. Of course it will be much weaker, but may be fortified by the addition of an essence of cayenne, prepared in the same manner.

107/27. *Alvin.*—(1) Solution of Mastic for teeth-stopping is made by dissolving a drachm of powdered mastic in an ounce of ether. (2) Mercury Amalgam.—Precipitate copper from a solution of copper sulphate with clean bright iron; wash the precipitate and, under hot water, combine with it about its own weight of mercury. Keep this under water, and, when required, warm in the water and squeeze out the surplus of mercury.

100/6. *Black Art.*—Formula for Plain Collodion for iodising:—

Alcohol-ether ..	..	..	..	10 oz.
Pyroxilin ..	..	..	..	60 grs

Iodisers to every 1 oz. of plain collodion:—

(1)				
Cadmium iodide ..	..	..	..	$4\frac{1}{2}$ grs.
" bromide ..	..	..	..	2 "
(2)				
Ammonium iodide ..	..	..	..	3 grs.
Cadmium iodide ..	..	..	..	$\frac{1}{2}$ gr.
Ammonium bromide ..	..	..	..	$1\frac{1}{2}$ gr.

The above formulæ are for negative work.

108/4. *Zylobalsam.*—We expect that your cochineal is the cause of the precipitation in the mixture. Better colour with tincture of cochineal, then you may filter with impunity.

108/5. *Alpha.*—The label for the Gout and Rheumatic Pills of last week should be "one twice a day immediately before food." Colchicum can be pushed too far—in fact, it is advisable that persons taking it should also take a laxative pill at bedtime twice a week.

108/13. *Y.*—(1) Lemon-flavour, we presume for culinary purposes.—Oil of lemon, 1 oz.; rectified spirit, 9 oz.; carbonate of magnesia, $\frac{1}{3}$ oz. Mix, and, after a day, filter. (2) Lemon-juice is best preserved by allowing it to ferment, whereby it is clarified; then add to each gallon a drachm of salicylic acid dissolved in an ounce of rectified spirit, and bottle. (3) Fresh Lemon-peel for making the tincture is sent out in shreds 1 inch long and about $\frac{1}{12}$ inch thick. (4) Tincture of lemon is made with proof-spirit because rectified spirit hardens the fresh peel, and the weaker spirit extracts the aroma better.

107/38. *Amos Malory* (New London).—The book is out of print, and an enlarged work, "Pharmacographia Indica," by the late Dr. Dymock, Surgeon-Major Warden, and Mr. David Hooper, is now in course of publication by Kegan Paul, Trench, Trübner & Co. (Limited). The published price has not transpired, but we should think it is about 3*l.* for the three volumes.

105/72. *Sigma.*—(1) Spirit (or Extract) of Ylang-Ylang is made by dissolving 3 drachms of the oil in a pint of rectified spirit. (2) *Marechale Bouquet*:—

Oil of cloves ..	..	..	..	..	\text{mxx.
" sandalwood ..	..	..	..	..	\text{mxx.
Essence of musk ..	..	..	..	..	\text{fl.
" ambergris ..	..	..	..	..	\text{fl.
Spirit of neroli ..	..	..	..	..	\text{flj.
Tincture of tonka ..	..	..	..	..	\text{flj.
Essence of vanilla ..	..	..	..	..	\text{flj.
Tincture of orris root ..	..	..	..	..	\text{flj.
Spirit of vetivert ..	..	..	..	..	\text{flj.
" rose ..	..	..	..	..	\text{fliv.
Orange-flower extract ..	..	..	..	..	\text{fliv.

Mix.

You will find directions for making most of these spirits, essences, &c., in the 1891 *DIARY*.

105/48. *Ammonia.*—When strong solution of ammonia is mixed with water, the volume increases. The expansion is about 0.5 per cent.

106/30. *Foam.*—Heading for Beer is made with quillaia or senega, preferably the former, $2\frac{1}{2}$ oz. to the pint of weak spirit (S.V.R. 1 and water 2), with the addition of a drachm of solution of ammonia.

109/24. *Hastings*.—In performing Esbach's Albumin-test, the solution used is one of picric acid 10 grammes, and citric acid 20 grammes, in a litre of water. Urine is poured into the tube up to the point U, and the test-solution up to R. If the precipitate does not settle in the twenty-four hours, perhaps the urine is alkaline; if so, it should be acidified with acetic acid in the first instance, or if albumen is very abundant, dilute the urine with an equal quantity of water, and multiply the result by 2.

109/23. *Papier*.—Parchment-paper is made by immersing unsized paper in sulphuric acid (1-3), afterwards in an alkali-bath, and, when washed, calendering it.

101/29. *R. Forde*.—Standard Soap solution for Water-analysis.—Triturate 150 parts of lead-plaster in a mortar with 40 parts of dry potassium carbonate, and make into a cream with rectified spirit. After some time, filter, washing the filter with spirit, and add as much water to the filter as would make it of proof spirit strength. It is now to be tested with the standard calcium-chloride solution (pure calcium carbonate 8 grains, dissolved in hydrochloric acid q.s., evaporated to dryness, the residue dissolved in 16 oz. of water, and this, diluted to a gallon, makes a water of 8° hardness), and diluted until 180 grain-measures give a permanent lather with 1,000 grain-measures of the 8° water.

Information Supplied.

99/37. *Papier Fayard*. Gout Paper.—Euphorbium 3 drachms, cantharides 6 drachms, powdered and digested with 4 cz alcohol, and 3 drachms Venice turpentine added to the strained tincture. Fine paper is dipped into it and dried in the air. Mohr directs 4 drachms of cantharides and 1 drachm euphorbium to be digested in 5 oz. of highly rectified spirit; filter, and add 1½ oz. Venice turpentine, previously liquefied with 2 cz. of resin. To be spread on the paper while warm. I quote from Beasley. J. F. BROWN.

The label "Papier Fayard et Blayn papier chimique du Codex" is a sufficient explanation. In the expired patent (patents on medicinal compounds, &c., were forbidden in France by a law of 1844) the following is the process given:—The paper is first rendered waterproof in the following manner:—Linseed oil, 500; garlic, chopped fine, 30; turpentine, 500; acetate of lead, 50; yellow ochre, 30; red lead, 15. The garlic is boiled with the oil, and stirred continuously. It is then strained, and the other substances added. The resulting preparation is then spread on tissue paper, either with a sponge or a broad camel-hair pencil, such as is used by gilders, and allowed to dry at the ordinary temperature or in a heated room for about a fortnight, the paper being hung on sticks to allow free passage of air. The acetate of lead, yellow ochre, and red lead may be replaced by well-lixivated red ochre and litharge, rubbed down with oil. When the paper is dry enough the following mixture is spread on:—

	Parts
Olive oil	203
Yellow wax	6 (in summer 10)
Red lead	100 (,, ,, 110)

Heat the oil in a capacious vessel until the vapours commence to rise, add the red lead, stirring continually with a long spatula. After the action has completely ceased remove from the fire, add the wax without ceasing to stir even after it be melted. It is necessary that a whitish froth should form, and no more; the plaster should be neither too soft nor too hard and grainy.

This paper is recommended for pains, burns, and corns. C. B. G. (109/15.)

The original specification for "Papier Fayard" was:—Linseed oil, 500; garlic, 50; turpentine, 400; acetate of lead, 50; yellow ochre, 30; red lead, 15. This mixture after boiling the ingredients, spread on paper, and dried during fifteen days. The "papier chimique" of the Codex Français is a similar preparation, and probably imitated from the original Papier Fayard et Blayn. VERITE. (109/25)

98/60. *Spirit Cagliari*.—It is possible that the eau hemistatique Pagliari is understood by this. Formula:—

	Parts
Benzoin	250
Alum	500
Water	5,000

Boil six hours, adding hot water to replace waste.

VERITE. (109/25.)

? Spirit cochlearæ.

T. M. C. (109/90.)

Acetum Scillæ.—In connection with the note which v. print elsewhere, we have to acknowledge postcards from the following: Messrs. H. D. Kelf (Reading), A. Stooke (Sittingbourne), J. W. Holmes (Retford), H. Barton, E. Yates (Manchester), S. Ward (Batley Carr), A. F. Brookes (Birkenhead) and anonymous correspondents.

EMETINE ESTIMATION.

MR. G. KOTTMAYER, in a critical article on this subject in the *Pharmaceutische Post* (Nos. 24 and 25) comments adversely upon Flückiger's process for the extraction of emetine from ipecacuanha-root, showing that the chloroform residue is not exclusively emetine, and that the drug is by no means completely extracted. Other similar processes are also referred to, especially Kremel's, in which a mixture of lime and powdered ipecacuanha, after treatment with water and drying, is extracted with chloroform. The alkaloidal residue from this contains "resin"—i.e., a substance insoluble in dilute hydrochloric acid. This was found to be the objection to all known processes, and it is necessary to make a correction for the amount of insoluble matter thus retained with the alkaloid. Lloyd's ferric hydroxide method of assay shares the same objection, the author remarking that it gave but slight satisfaction. He thought, however, that the principle of fixing the organic acids and colouring-matter of the ipecacuanha with a heavy metal a good one, and, in order to determine the emetine value of samples of the Rio, Singapore, and Carthagen roots, he devised the following method:—

Fifteen grammes of the powdered root was macerated in 148 c.c. of rectified spirit and 2 c.c. of hydrochloric acid (s.g. 1.12) for four days at 40° C. Then 100 c.c. of the clear tincture was pipetted off, 20 c.c. of alcoholic lead acetate solution (1 in 10 of proof spirit) and 1.5 gramme of slaked lime added, and the mixture evaporated on a water bath to a syrupy consistence; 5 grammes of powdered glass was then added, and the whole evaporated to dryness and powdered. The powder was then extracted with chloroform for ten hours, by which time no more alkaloid was removed by the solvent. The chloroform, on evaporation, left brownish-yellow substance, which was weighed, the alkaloid extracted with 2 c.c. of normal sulphuric acid, and the insoluble portion collected, dried, and weighed, the difference giving the actual amount of emetine. The following results are interesting:—

Rio Ipecacuanha.

Chloroform extract	0.218
Resin	0.338

Emetine 0.210 = 2.37 per cent.

A second sample gave 2.24 per cent.

Singapore Ipecacuanha.

Chloroform extract	0.238
Resin	0.240

Emetine 0.93 = 2.22 per cent.

A second sample gave 2.3 per cent.

Cartagena Ipecacuanha.

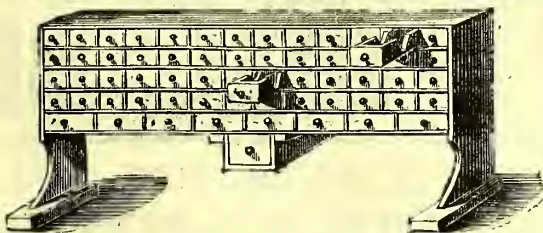
Chloroform extract	0.183
Resin	0.323

Emetine 0.160 = 1.81 per cent.

We quote these results more as showing the necessity of washing the chloroform extract than for comparison of the different kinds of ipecacuanha. On the latter point it may be desirable to have corroborative work.

THE NEW DRUGGIST'S LABEL CABINET

(PATENTED).



H. POTHS & CO., 4 CREECHURCH LANE, LONDON, E.C.
LEADENHALL ST.
Full Particulars on Application. [2]

CRYSTAL PALACE JOHN BONDS GOLD MEDAL MARKING INK

Sale ever increasing at Home and Abroad, showing the appreciation by Trade and Public of this original and genuine Preparation.

GIVEN AWAY

And enclosed with every 6d. and 1s. Bottle and every 6d. and 1s. Marking Ink Penoil, a voucher entitling Purchasers to their Rubber Stamp. Name in full or Monogram, for Marking Linen or Paper.

WHOLESALE and EXPORT DEPOT:—75 SOUTHGATE ROAD, LONDON, N.

Send for Illustrated Price Lists and Samples for Travellers and Showrooms.

LARGEST SALE OF ANY MARKING INK IN THE WORLD.

Perry & Co's
Marking Ink
Pencil.

PERRY & CO.'S MARKING INK PENCILS

1891.
No Heat required. Turns Jet Black while the wording is being written. No necessity of exposing the marks to the air. The marks are black and permanent, even after a severe washing. Will not burn or injure the fabric.

PRICE 1/- each. Sample Pencil, post free, 1/1.
SOLD by all STATIONERS and CHEMISTS.

Wholesale—
PERRY & CO., LIM., HOLBORN VIADUCT, LONDON.

Perry & Co's
Marking Ink
Pencil.



PREMIER
VINOLIA SOAP, 4d.



FOR ITCHING.
1/9, 3/6 and 6/-



SOLUBLE and SAFE.
1/9, 3/6 and 6/-



VESTAL
VINOLIA SOAP, 2/6.



TOILET, 1/6.
VESTAL, 2/6.



5/6 PER VASE.



7/6 PER VASE.



TOILET, 2/6.



TOILET, 1/-, 1/6, 2/6.
VESTAL, 4/6. VESTAL, 2/6.

R. W. GREEFF & CO., 29 MINCING LANE,

AGENTS FOR

J. D. RIEDEL, BERLIN,

SPECIALITIES.

**SULFONAL-RIEDEL,
PHENACETIN-RIEDEL,
THIOL-RIEDEL,
PEPSIN-RIEDEL,
CHLORALHYDRATE-RIEDEL,
AND
SALIPYRIN-RIEDEL**

(This article is sold Wholesale by Messrs. ALLEN & HANBURY'S,
Plough Court, Lombard Street, E.C.)

DR. HENRY BYK'S PURE CHEMICALS.

ACID, PYROGALLIC BISUB.

Professor Dr. Vogel says:—"..... light snowy white and carefully prepared article—DISSOLVING COMPLETELY and quickly in water or alcohol."

Professor Dr. J. M. Eder says:—"Dr. Byk's Pyrogallie Acid is exceedingly light and bulky as good an Acid as can be produced."

This is the lightest, and consequently purest, Pyro in the trade.

AMMONIUM BROMIDE.

COLD CHLORIDE.

HYDROQUINONE.

**DR. BYK'S PERMANENT HYDRO-
QUINONE.** Light yellow crystals.
PATENT, Insensible to moist air and light.

SODIUM BROMIDE.

ACID. BENZOIC. E RESINA.

Guaranteed to be sublimed from and retaining the fragrance of Gm. Benjamin.

ACID. CALLIC. CRYST. CHEM. PURE.

Perfectly white needles.

ACID, TANNIC,

Purest quality, powdered and granulated. Dissolves colourless in water, alcohol, and ether, free from resinous and colouring matter. For medicine and finest work in art.

ACID, TANNIC LEVISSIMA PUREST.

Dissolves colourless in water, alcohol, and ether, free from resinous and colouring matter. Used for similar purposes as the chemically-pure powder.

IODOFORM CRYSTALS.

POTASH BROMIDE CRYST.

POTASH IODIDE CRYST.

RENNET POWDER.

SODIUM BENZOATE.

SODIUM IODIDE.

BISMUTH SALICYLATE.

STRONTIUM BROMATE.

SALICYLIC ACID AND

SALICYLATE OF SODA.

Chemically and Physiologically Pure.

SOLE WHOLESALE AGENTS:

R. W. GREEFF & CO., 29 Mincing Lane, **LONDON, E.C.**

WYLEYS LIMITED,

Manufacturing & Analytical Chemists,
WHOLESALE & EXPORT DRUGGISTS,
COVENTRY.

Warehouses, Laboratories, and Drug Mills, COVENTRY.

BRANCH HOUSE: 52 MOOR STREET, BIRMINGHAM.

MANUFACTURERS OF
PHARMACEUTICAL PREPARATIONS & SPECIALITIES,
PEARL & GELATINE COATED PILLS,
Compressed Pellets, Sugar-coated Pellets, Hypodermic Pellets & Cases
STANDARDIZED, CONCENTRATED, AND GLYCERINE TINCTURES,
HYPODERMIC SOLUTIONS,
CONCENTRATED INFUSIONS & DECOCTIONS
PATENT DURAPLASTIC COATED HORSE BALLS.

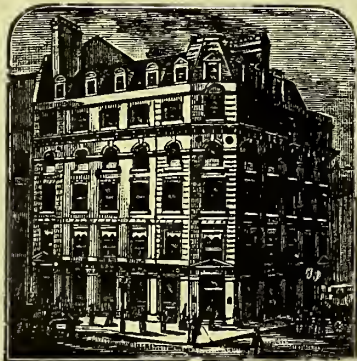
IMPORTERS OF FINE ESSENTIAL OILS.
New Drugs and Synthetic Remedies.

SPECIAL ATTENTION GIVEN TO SETTING-UP ORDERS.

WE SUPPLY ALL REQUISITES—DRUGS, PATENTS, & SUNDRIES.

COMPLETE PRICE LIST ON APPLICATION.

BARCLAY & SONS, LIMITED.



We hold a large stock of the following seasonable goods. Orders for any of these will oblige.

ENEMAS. SPONGE BAGS. SPONGES.

PHOTOGRAPHIC DRY PLATES, &c. &c. SPRAYS.

TOBACCO IN PACKETS, at Makers' Prices.

FILTERS. FLESH GLOVES. TRUSSES.

TEETHING TEATS, "LILY," "SPENCE'S," &c., &c.

ELASTIC STOCKINGS, Superior Make.

TEATS, TUBING, &c., &c.

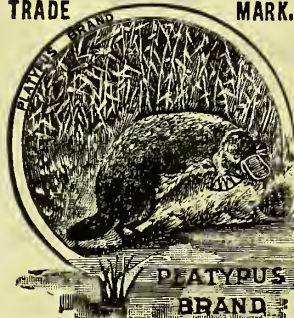
SEIDLITZ POWDERS, B.P. strength (full weight), 1/- boxes, 5/6 doz.

95 FARRINGDON ST., LONDON, E.C.

ESTABLISHED UPWARDS OF A CENTURY.

TASMANIA EUCALYPTUS OIL COMPANY

TRADE MARK.



DISTILLERS OF ABSOLUTELY PURE

EUCALYPTUS GLOBULUS OIL, and EXTRACT.

FIRST AWARD AND GOLD MEDAL, TASMANIAN EXHIBITION, 1892.

Orders now being booked for the coming winter's requirements. Apply for Information and Samples to the Company,

138 LEADENHALL STREET, LONDON, E.C.

Telegraphic Address—"EUCALYPTUS LONDON."

Distilleries and Chief Office, HOBART, TASMANIA.

DUNCAN, FLOCKHART & CO.

Wholesale and Export Druggists,

EDINBURGH.

CHLOROFORM

(DUNCAN'S).

PREPARED FROM PURE AND METHYLATED SPIRIT.

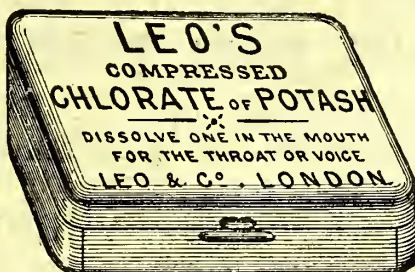
Also CHLOROFORM (BLUE LABEL).

Put up in all sizes of bottles. A strap with Name and Trade Mark of the Firm is placed over the stopper of each bottle. For Export, in stoppered bottles, securely luted, and in hermetically sealed flasks when required.

N.B.—We guarantee all the above CHLOROFORMS to be PURE CHLOROFORM, answering all the tests of the British Pharmacopœia.

Ammon. Brom.
Ammon. Chlor.
Antifebrin
Antipyrin
Bismuth Subnit.
Chloralamid
Ipecac. Powd.
Ipecac. & Opium
Pepsine, B.P.
Phenacetin
Potass. Bicarb.
Potass. Brom.

When
ordering
specify
LEO'S.



They are
supplied by
all the
Wholesale
Houses.

Potass. Iodide
Quinine
Salol
Salicin
Soda Bicarb.
Soda Mint
Soda Salicylate
Sulphonal
Sulphur Compound
Urethane
Voice (Potass. Chlor.,
Borax and Cocaine)

COMPRESSED CHLORATE of POTASH. CHLORATE OF POTASH & BORAX.

Quotations given for large and small quantities.

[2]

LEO & CO.

8 CREECHURCH LANE, LONDON, E.C.

Schacht's Preparations.

SCHACHT'S LIQUOR BISMUTHI.

Absolutely pure. The original preparation, invented and introduced to medicine by Mr. Schacht in 1856. Its distinct superiority is universally admitted. In $\frac{1}{2}$ lb., 1 lb., 2 lb., and 5 lb. bottles. Dose: 1 drachm diluted. When ordering, please to specify "SCHACHT'S."

SCHACHT'S LIQ. BISMUTHI SEDATIVUS.

Contains pure Bismuth and *Pepsina Liquida* in combination with sedatives. A formula most serviceable in the treatment of gastric pain. In 4 oz., $\frac{1}{2}$ lb., and 1 lb. bottles.

SCHACHT'S SYR. CINCHONÆ ALCOHOLICUS.

A standard preparation, of definite alkaloidal strength, containing the entire medicinal properties of the finest Cinchona Bark. It is, in fact, *Bark minus the woody fibre*, and its efficiency has been proved by careful medical enquiry. Dose: Ten to sixty drops.

SCHACHT'S PEPSINA LIQUIDA (REGISTERED TITLE).

Fluid pepsine of extraordinary activity—tasteless, odourless, attractive to patients, and reasonable in price. Every teaspoonful when tested by the official B.P. process is *guaranteed* to effect the solution of 1,000 grains of albumen. Peptic power is the only test of value. Most of the fetid and repulsive dry Pepsinæ have proved worthless. In 4 oz. bottles, 2s. 6d. each; and larger sizes for dispensing at a cheap rate.

SCHACHT'S PEPSINA LIQUIDA C. BISMUTHO.

Each drachm contains in a concentrated form, besides the fluid pepsine a full dose of Schacht's Liquor Bismuthi. Dose: One drachm. In $\frac{1}{2}$ lb. and 1 lb. bottles.

N.B.—*Peps. Liq. c. Bismutho Co. contains, in addition, one gr. soluble Eüonymin in each drachm.*

SCHACHT'S PEPSINA LIQUIDA C. EUONYMIN.

Each drachm contains one grain of soluble Eüonymin. Dose: One drachm. For dispensing $\frac{1}{2}$ lb. and 1 lb. bottles.

SCHACHT'S LIQ. PODOPHYLLI C. BISMUTHO.

A perfect solution of Podophyllin, containing $\frac{1}{2}$ gr. in each drachm.

SCHACHT'S LIQUOR CASCARÆ DULCIS.

A pleasant and active form of Cascara Sagrada. Dose: One to three teaspoonfuls diluted. In 4 oz., $\frac{1}{2}$ lb. and 1 lb. bottles.

SCHACHT'S INFALLIBLE RENNET.

An entirely new Essence, perfectly reliable, for the coagulation of Milk, and the production of Junkets and Curds and Whey. It is a preparation of the most wholesome nature, that contains no salt, and has no special taste, smell, or colour. In large bottles at 1s. of any Chemists. This Essence keeps well in any climate.

The above Preparations can be procured from Messrs. Barclay & Sons, W. Edwards & Son, and the Wholesale Druggists, or direct by post from

GILES, SCHACHT & Co., Clifton, Bristol.

C. F. BOEHRINGER & SOEHNE

WALDHOF, NEAR MANNHEIM,

MANUFACTURERS OF

SULPHATE OF QUININE, B. and S. Brand, and all other Cinchona preparations, also of ACETANILID, CAFFEINE, COCAINE, GALLIC ACID, GLYCERINE, SALICYLIC ACID, and SALICYLATES, STRYCHNINE, &c.

STOCKS KEPT IN LONDON, GLASGOW, AND DUBLIN.

AGENTS. — LONDON: Messrs. DOMEIER & CO., 13 St. Mary-at-Hill, E.C.

" — GLASGOW: " F. R. MUELLER & CO., 47 Waterloo Street.

" — DUBLIN: Mr. JOS. LECKY, 26 Eustace Street.

SOLE AGENT,
FREDK. BOEHM, LONDON.

CHININFABRIK AUERBACH

(Dr. SEYFERTH),

SULPHATE OF QUININE

And all other Cinchona Preparations.

STOCK KEPT IN LONDON.

Certified by Professor Fresenius, of Wiesbaden, as equal to the best preparations of other marks.

THE FACTORY SUPPLIED THE
AMERICAN, RUSSIAN, and DUTCH GOVERNMENTS
DURING LAST SEASON.

DEUTSCHE GOLD AND SILBER SCHEIDE ANSTALT

(VORMALS ROESSLER),

FRANKFORT-ON-MAINE, MANUFACTURERS OF CHEMICALS

For Pharmaceutical, Photographic, and
Technical Purposes. [2]

SPECIALITIES.

NITRATE OF SILVER.

CHLORIDE OF GOLD.

CYANIDE OF POTASH.

PERMANGAN. OF POTASH.

CHROME ALUM.

ACETANILIDE.

FREDK. BOEHM, LONDON.

SMITH & SONS

WHOLESALE DRUGGISTS AND MANUFACTURING CHEMISTS,
44, 46, and 48 MAGDALEN STREET, NORWICH.
PURE CHEMICALS. NEW REMEDIES.

PHARMACEUTICAL

IMPORTERS OF ESS. LIMONIS

MANUFACTURERS



PREPARATIONS

SUPER AND ALL ESSENTIAL OILS,

CRUDE DRUGS AND CHEMICALS.

DEALERS IN DRUGGISTS' SUNDRIES AND SURGICAL APPLIANCE

PRICES CURRENT ON APPLICATION.

TELEGRAMS—"SMITH NORWICH."

LOFTHOUSE & SALTMER,

MANUFACTURING CHEMISTS, WHOLESALE & EXPORT DRUG MERCHANTS, HULL

Manufacturers of all Pharmaceutical Preparations on the best and most improved principles. Quotations on application.
DEALERS IN PURE CHEMICALS for Medicinal, Photographic, and Commercial purposes.

Importers of Cod Liver, Castor,
and Olive Oils; Extra Super
Essence of Lemon and Berga-
mot, Otto de Rose, and all



Essential Oils; Valerian Sa-
fron; Vanillas; Fruit Essence
Carmine, Aniline Dyes; Bee
Wax, &c., &c.

MANUFACTURERS of Very Superior Flexible Gelatine Capsules of Balsam Copaiba, Cascara Sagrada, Castor Oil, Cod-liver Oil, Santal Oil, &c. Samples and Lowest Quotations per 1,000, or in Boxes for Retail, will be sent on application for either the Wholesale or Retail Trade.

ALOIN,

THE ACTIVE PRINCIPLE OF ALOES.

MANUFACTURED BY THE DISCOVERERS—

T. & H. SMITH & CO., EDINBURGH AND LONDON.

"The uniformity in strength of Aloin, the smallness of its dose, and the certainty of its action, should commend it to the favourable consideration of all medical practitioners.— *Vide* Dr. Wm. Craig's investigations respecting our Aloin, published in the *Edinburgh Medical Journal* for May 1875.

Edinburgh Address—21 Duke St. London Address—12 Worship St., E.C.

New York Office—20 Cedar Street: DILLON & CO., Agents. [3]

SPECIALITIES.

Castor Oil. Almond Oil. Olive Oil. Cod-liver Oil. Aetio Acid. Tartaric Acid. Phosphoric Acid. Salicylic Acid. Camphor. Glycerine. Lithia Salts. Tartar Emet. Castile Soap. Pepsin, P.B. Albumen. Herbs & Extracts. Insect Powder. Mercurials. Camomiles. Ess. of Lemon. Gums. Perfumes. American Cotton Oil, etc.

IMPORTERS—EXPORTERS.

COMMISSION MERCHANTS.

FURST

LONDON, E.C., 17 Philpot Lane; and NEW YORK, 2 & 4 Stone Street.

SAMPLES AND PRICES ON APPLICATION.

We only supply goods direct from Manufacturers personally known to ourselves. We can consequently vouch for the purity of the articles we sell.

CORRESPONDENCE SOLICITED.

C. R. HARKER, STAGG & MORGAN

WHOLESALE & EXPORT DRUGGISTS,

Manufacturing Chemists,

PROPRIETORS OF

FIELD'S SELECT PREPARATIONS

15 Laurence Pountney Lane

AND

Arthur Street West,

LONDON, E.C.



C.R.H.S.&M.

Saline.

Liquid Extracts.

Glycerine and Cucumber.

Concentrated Waters.

Liq. Papain et Iridin Co.

Liq. Eucalypti et Pepsine Co.

Liq. Pepticus.

Liq. Santal c. Buchu et Cubeba.

Liq. Copaiba c. Buchu, Cubeba, et Matico.

Edulcine.

Chlorodyne.

Concentrated Liquors.

Concentrated Infusions.

Liq. Eucalypti et Pepsine Co.

TELEGRAPHIC ADDRESS: "EDULCINE."

FELIX BERGER,

7 Mark Lane, London, E.C.

FOSSIL MEAL,

OR

INFUSORIAL EARTH

(KIESELGUHR).

RAW, CALCINATED, AND WASHED, the PUREST OFFERED, as every parcel is analysed by an Analytical Chemist.

Samples and Quotations on application.

J. ROBBINS & CO. **OXFORD ST. 147**

METHYLENE

Obtained by the action of Metallic Zinc on Chloroform and Alcohol.

Discovered to be a general Anæsthetic by Dr. RICHARDSON in 1867.

Bottles, 16s.; 8-oz., 8s. 6d.; 4-oz., 4s. 6d.; 2-oz., 2s. 6d.

COMPOUND ANÆSTHETIC ETHER,

For producing Local Anæsthesia.

In 4-oz., 10-oz., and 20-oz. Stopped Bottles, 2s., 4s., and 7s.

OZONIC ETHER,

In 1-oz., 4-oz., 8-oz., and 16-oz. Stopped Bottles, 2s., 3s. 6d., 7s., and 12s.

PEROXIDE OF HYDROGEN,

First introduced as a Medicine by Dr. RICHARDSON.

ETHYLATE OF SODIUM

(Dr. RICHARDSON'S Formula, for removing Nævi, &c. In 1-oz. & 1-oz. Bottles, with elongated Stoppers for applying the Caustic, 2s. 6d. & 4s. 6d.; 16-oz., 12s.)

STYPTIC COLLOID,

For promoting the Healing of Wounds by the first intention.

In 2-oz. and 4-oz. Bottles, with Brush, 2s. 6d.

CHARCOAL CAPSULES,

Containing Pure Vegetable Ivory Charcoal.

In Boxes, 2s. 6d. each.

J. ROBBINS & CO. **OXFORD ST. 147**

BOOT'S PURE DRUG CO., LIM.

DISPENSING AND FAMILY CHEMISTS

PATENT MEDICINE VENDORS & DEALERS IN MEDICINAL WATERS,

Having some twenty branches in NOTTINGHAM, SHEFFIELD, LINCOLN, DERBY, GRIMSBY, ILKESTON, GRANTHAM and BURTON-ON-TRENT, have exceptional opportunities of bringing Proprietary Articles before the public, and they will be glad to take up special agencies for articles of sterling merit where the proprietors are willing to meet their efforts to make a push of the same. Careful supervision of the distribution of advertising matter will be undertaken. Correspondence invited.

JESSE BOOT, Managing Director, Island St., NOTTINGHAM

"SPECIALITIES" OF WIDE REPUTATION

Suitably Packed for Home and Export, in various Languages, for all Markets.

'COAGULINE' The Cement for all Broken Articles. LINSEED, Chloro-Linseed and Throat Lozenges, Jujubes, &c. CUE CEMENT, Cue Tips, Wafers, FIXERS, CHALKS, &c.	'LAVA' CEMENT. A fusible, impervious Glass Valve Tubes, For Fecding Bottles.	COMPOUND ESSENCE OF LINSEED, OXYMEL SCILLA (exceptionally brilliant) Dec. Senega Conat. PHOSPHOSACCHARITE. GLYCERLINE. Linum Glycerinum.	'SAPO-LINI' LINSEED SOAP, IN "BROWN WINDSOR" AND "ROSOTTO."	CHESSHIRE BIRD LIME. EMOLLIENT For Chapped Hands, &c. ELASTIC STOCKINGS, KNEE CAPS, SOCKS, ETC.	CHEMICAL Disinfectant TIC KAYS LINUM CATHARTICUM PILLS GUN COVER and CARRIER. 'THERMONE' HEAT RADIATOR.
---	--	---	--	--	---

Prices, Circulars with Name and Address, Specimens, Show Cards, Glass Tablets, &c., &c., on application.

KAY BROTHERS LIMITED, Laboratory and Works, ST. PETERSGATE MILLS, STOCKPORT, Founded A.D. 1788, Incorporated 1887

W. SUTTON & CO.

76 CHISWELL STREET, late 10 Bow Churchyard, LONDON.

SOLE MAKERS OF THE

ORIGINAL BATEMAN'S DROPS & DAFFY'S ELIXIR.

Proprietary Medicines, Perfumery, Mineral Waters, Lozenges, Druggists' Sundries, and Miscellaneous Articles.

PRICE LIST FREE ON APPLICATION.

ESTABLISHED 1813.

CLAY, DOD & COMPANY,

WHOLESALE AND EXPORT DRUGGISTS,

52 ST. ANNE STREET, LIVERPOOL.

Address for Telegrams—"CLAY LIVERPOOL."

Telephone No. 1192.

Mills and Laboratories—WAKEFIELD STREET.

BITUMINOL, or VASELINE SUBSTITUTE.

7 LB. SECOND, 4½ LB. CWT, 60/-, 38/-, IN TINS 7 AND 14 LBS. (TINS FREE).

Manufacturers of all descriptions of

PHARMACEUTICAL PREPARATIONS, COATED TASTELESS PILLS.

POWDERS GROUND IN OWN MILLS. PURITY GUARANTEED.

Samples free on application. Special Quotation to Cash or Large Buyers. Monthly Priced List forwarded on receipt of business card.

CLAY'S LAVENDER WATER, HEALTH SALINE, &c.

Guy's Tonic.

We think it advisable to inform the Trade that the medicines sold by us do not contain any poisonous ingredient, and can be sold with perfect confidence by Chemists to their own profit and their customers' safety and benefit. Our preparations are now in brisk demand in all parts of the United Kingdom, and our advertising policy will be steadily enlarged.

Guy's Fruit Pills.

Guy's Fruit Pills are usually required in association with Guy's Tonic to secure the best results, and instructions to this effect accompany each bottle of Guy's Tonic. It is quite evident, therefore, that wherever Guy's Tonic is in demand Guy's Fruit Pills will be asked for.

We will send 1 dozen of the 1s. 1½d. size post free to any Chemist on receipt of remittance for 10/6.

FOR FULLER PARTICULARS AND TRADE TERMS, ADDRESS—

GUY'S TONIC COMPANY, 4 Ludgate Circus, LONDON, E.C.

CHEST AND LUNG PROTECTORS.



FIG. 97.

Scarlet—	No. 1	2	3	4	5	6
Double..... per doz.	14/-	18/-	22/-	27/-	36/-	44/-
Single	6/-	8/-	9/6	11/6	15/6	24/6
The "Winter"						
Fig. 97. Vest Shape, ..	18/-	24/-	30/-	36/-	42/-	55/-
Natural Grey Fur-Felt (Solport's).						
Double..... per doz.	15/-	20/-	25/6	34/-	42/6	52/-
Single	6/6	9/-	12/-	15/6	20/-	25/-

NATURAL GREY FUR- FELT CHEST PROTECTORS.

These are made from a specially-manufactured felt, the material of which is pure, soft, undyed Lamb's Wool—to which is added the Fur of the Grey Coney.

They present several advantages.

They are very comfortable to wear, being soft, smooth, and warm.

They allow free circulation for the air.

They are undyed, so cannot irritate the most sensitive skin.

FRANCIS NEWBERY & SONS,

Druggists' Sundriesmen, 1 & 3 King Edward St., Newgate St., LONDON, E.C.

ESTABLISHED 1746.

CLARKE'S

WORLD FAMED

BLOOD MIXTURE

THE GREAT

BLOOD PURIFIER.

"CLARKE'S BLOOD MIXTURE is ENTIRELY FREE from any POISON or metallic impregnation, does not contain ANY INJURIOUS INGREDIENT, and is a good, safe, and useful medicine."

ALFRED SWAINE TAYLOR, M.D., F.R.S.,
Lecturer on
Medical Jurisprudence and Toxicology.

Counter Bills and Posters, with Name and Address, also Show Cards, on application. Printed matter supplied in any Language for Foreign Agents.

CAUTION.—Immediate proceedings will be taken against all persons pirating the Trade Mark, "Blood Mixture" (Registered No. 3,275), Labels Wrappers, Bills, or Advertisements, or in any way infringing the rights of the Sole Proprietors,

THE LINCOLN & MIDLAND COUNTIES DRUG CO., LINCOLN, ENGLAND.



"SEQUAH'S OIL." (Regd.)

SEQUAH'S PRAIRIE FLOWER, SEQUAH'S OIL, AND SEQUAH'S INSTANT RELIEF

Always give satisfaction.

SEQUAH, LIMITED, 44 FARRINGDON ST., E.C.

SPECIAL NOTICE.—At the request of a large number of the Retail Trade, who are desirous of obtaining small quantities of our Goods at the lowest possible prices, we beg to inform the Trade that we have decided to supply the Goods in dozen lots, carriage paid, at our lowest terms—viz., 18/6 per dozen, Cash with Order. This offer holds good for the Home Trade only.

TRADE MARK.



"SEQUAH INDIAN
PRAIRIE FLOWER."

REGISTERED.



Price Lists and Descriptive Pamphlets on application.

Eucalyptus Globulus

The undersigned call the attention of Medical Men and Pharmacists to the superior nature of their

Pure Oil of Eucalyptus Globulus,

distilled by them from leaves of Blue Gum trees cultivated in California. It should be noted that the reputation of Eucalyptus Oil is solely based upon the virtues of the Globulus variety; but very little of this now comes into the market from Australia, because it can only be produced there at from 15s. to 20s. per lb.

The DOWNIE B. I. P. CO. have extensive forests of Blue Gum trees in California, grown from Australian *E. GLOBULUS* seeds. The leaves of these trees are used for manufacturing an aqueous extract, as a boiler-incrustation preventive, and the company have lately perfected the means for collecting the Essential Oil. This Oil is of great purity, is unmixed with kindred bodies, and contains the full percentage of Eucalyptol. Since it is obtained as a by-product, the manufacturers place it on the market at a price which in other circumstances would be impossible.

Please specify "DOWNIES" in ordering through any Wholesale House, as there are many adulterated and worthless varieties in the market.

DOWNIE B. I. P. CO.

4 REDCROSS STREET, LIVERPOOL; and
204 MARKET ST., SAN FRANCISCO.

CUMMINGS'



CYGNET BRAND EUCALYPTUS OIL

Distilled from the leaves of Eucalyptus CNEORIFOLIA formerly considered a sub-variety of *E. Oleosa*, but now classed as a distinct variety.

The Trade are invited to test this carefully prepared Oil, which since its recent introduction from Australia has won the unqualified approval of the leading British, American, and Continental Authorities. Its purity, pleasant perfume, the unprecedentedly large percentage of crystallizable Eucalyptol it contains, and other good qualities, are speedily gaining the preference of buyers.

Samples and Quotations on Application.

Sole Consignees—Wholesale only—

J. W. DRYSDALE & CO

8 CREECHURCH LANE, LONDON, E.C.

ESTABLISHED 1833.
HORSES.—LIEUT. JAMES'S BLISTER



CAUTION.

The annexed Label is the top of every Pot of the ORIGINAL and GENUINE BLISTER.

The Messrs. Barclay & Sons, 95 Farringdon Street, London, and Messrs. Raimes & Sons, Edinburgh, are now and have been Agents 57 years.

AGENTS:—Sutton & Co., 10 Bow Churchyard; W. Edwards & Co., 157 Queen Victoria Street; Newbery & Son, 37 Newgate Street; Evans & Lescher, Bartholomew Close; Burgoyne, Burbridges & Co., 16 Coleman Street; Lynch & Co., 171A Aldersgate Street; South Brothers and Barclay, Birmingham; R. Hovenden & Sons, 93 & 95 Road, Finsbury; Sanger & Son, 150 Oxford Street; Millard & Co., 40 Charterhouse Square; Corry & Soper, Shad Thames; A. A. Campbell, Leadenhall Street, London; Woolley, Sons & Co., 59 Market Street, Manchester; Apothecaries Company, Virginia St., Glasgow; John Thomson & Co., 58 Hanover Street, Liverpool; Boileau & Co., Bride Street, Dublin; McMaster & Co., 121 & 122 Capel Street, Dublin; Clarke & McMurtry, Victoria Street, Belfast; D. Galbraith, Londonderry; M. C. Delbecq, Pharmacie Anglaise, Bruxelles.

And by all Chemists, in Pots, 1/6, 2/3, 5/9, and 18/.

COLONIAL AGENTS:—MELBOURNE and WELLINGTON: F. Grimwade & Co.; SYDNEY, BRISBANE, and LAUNCESTON: Elliott Brothers; DUNEDIN and AUCKLAND: Kempthorne, Prosser & Co.; CALCUTTA: Smith, Stanistreet & Co.

W. H. JAMES, SOLE MANUFACTURER, FARINGDON, BERKSHIRE. Advertised in "Bell's Life" 64 years. Beware of Spurious Imitations.

SEE INDEX TO ADVERTISEMENTS

Pages 27 to 29.

SOZIO & ANDRIOLI

(Alpes Maritimes) **GRASSE** (France). [ESTABLISHED A.D. 1757.]

SPECIALITIES: Oils of Neroly, Lavender, Geranium (twice rectified on Rose Flowers), Thyme (red and white), Spike Lavender, Rosemary, Patchouly, Sandal Wood, &c., &c.

ONLY MAKERS OF THE CELEBRATED ORRIS ROOT OIL, crystallizing at + 15° Réaumur.

Flowers Pomades at the highest possible Saturation. Best Brand for Orange Flowers and Rose Water. Concentrated Essences, Sweet Almond Oil, &c. Stock kept in London.

London Agent—**MR. FREDK. BOEHM, 4 CULLUM ST., E.C.**

JAMES BOULTON & CO., L^{IM}.

CHEMICAL MANUFACTURERS,
CRAYFORD MILLS, STRATFORD, LONDON.

SPECIALITIES—

THE NEW PRESERVATIVE,

SEMPER-DULCIS or EVER-SWEET

For Milk, Butter, Cream, Sausages, &c., &c.

FINEST BUTTER COLOR

(BUTTERCUP BRAND).

ACIDS OF ALL KINDS.

GRANULATED EFFERVESCENT PREPARATIONS

BUYERS SHOULD SEND FOR QUOTATIONS.

DR. PAUL'S HIGH-CLASS MANICURE SPECIALITIES,

Certified as innocuous by eminent English and American Chemists.

CERAMINE.

Fertitizing Finger Tips, Face and Lips.....	2/6	18/-
---	-----	------

POUDRE LUSTRALE.

Gives a brilliant shell-like transparency to the Nails	2/6	18/-
--	-----	------

CRÈME CAMÉLIA.

Restores Rough and Chapped Skins to their original softness	2/6	18/-
---	-----	------

NAIL OLEATE.

Preserves and gives a brilliant polish to the Nails, and prevents Hangnails, &c.	1/6	10/6
---	-----	------

CLEANSING FLUID.

Instantly removes all stains from the surface and underneath the Nails	2/6	18/-
--	-----	------

FACE AND HANDS LOTION.

Softens the Skin and removes all discoloration ..	4/6	33/-
---	-----	------

EMERY BOARDS.

For bevelling the rough edges of the Nails after use of the file	1/-	7/-
--	-----	-----

ORANGE WOOD STICKS.

A valuable novelty introduced in Dr. Paul's system of Manicure to apply the "Cleansing Fluid" under the free margin of Nails, and thus avoid the danger of scratching with steel instruments, 7/- per doz. bundles.

CAUTION!—Dr. Paul's Specialities can be obtained at all first-class Perfumers' and Chemists', but many imitations are offered at inferior Stores.

WHOLESALE AGENTS:

OSBORNE, GARRETT & CO., FRITH STREET, LONDON, W.C.

PURE OTTO OF ROSE,

SPECIALITY OF

SHIPKOFF & CO.

DISTILLERS AND EXPORTERS,

KIZANLIK, BULGARIA.

Agent for Great Britain—**G. P. BAKER, 19 Ivy Lane, LONDON, E.C.**

THE OTTO OF ROSE which this house distils and exports is known above all by the absolute purity of its quality and the unexcelled sweetness and strength of its odour. It is guaranteed to be the finest essence produced in the famous Rose Valley of Bulgaria.

Shipkoff's Brand received the only award for Otto of Rose at the Paris Exhibition.

"PRICE'S GLYCERINE"

(Originally introduced in 1855).

Guaranteed free from ARSENIC

and all other impurities.

WHOLESALE FROM

PRICE'S PATENT CANDLE CO., LIMITED,

London, Liverpool, and Manchester.

SUPERFATTED MEDICINAL SOAPS

PREPARED FROM PRESCRIPTIONS AND UNDER THE CONSTANT CONTROL OF

Dr. MED. J. EICHHOFF, Senior Physician to the Wards for Skin and Venereal Diseases of the Elberfeld Hospital.

FIRST SERIES.

SUPERFATTED RESORCINE SALICYLIC SOAP.

In Parasitic Eczema, Seborrhoea Capitis.

SUPERFATTED RESORCINE SALICYLIC SULPHUR SOAP.

In Parasitic Eczema, Acne Vulgaris, Acne Rosacea.

SUPERFATTED RESORCINE SALICYLIC SULPHUR TAR SOAP.

In Psoriasis Vulgaris.

SUPERFATTED QUININE SOAP.

In mild cases of Mycosis, especially Pityriasis Versicolor.

SUPERFATTED IODOFORM SOAP.

For Chronic Ulcers, Venereal Bolls, &c., and also in the Massage Treatment of Small Tumours and Exudations.

SUPERFATTED HYDROXYLAMINE SOAP.

In Lupus, Psoriasis, Tinea Tonsurans and Parasitic Syphilis.

SUPERFATTED CREOLINE SOAP.

In Scabies, Impetigo Contagiosa, Intertrigo, Lupus.

SUPERFATTED ERGOTINE SOAP.

In Rosacea, Angiectasis, mild cases of Varix, and in the Massage Treatment of Migraine.

SUPERFATTED IODINE SOAP (READILY SOLUBLE).

For Small Tumours, Indolent Ulcers, Lupus, Parasitic Eczema, Syphilis, and Mycosis.

SUPERFATTED SALICYLIC CREOSOTE SOAP.

For Lupus.

SECOND SERIES.

SUPERFATTED MENTHOL SOAP.

In General and Local Pruritus (especially Genital and Anal).

SUPERFATTED SALOL SOAP.

In Parasitic Eczema, Psoriasis, Eczema, Marginatum and Mycosis.

(o. f. "Dermatologische Studien," Second Series, Vol. I. for 1889, and also "Volkmann'sche Sammlung Klinischer Vorträge," New Series, Vol. IV. 1890.)

Sole Manufacturer:—FERD. MULHENS, No. 4711, Glockengasse, Cologne-on-Rhine.

Under the constant supervision of Mr. J. BRASCHOS, of Cologne, Pharmaceutical Chemist.

Agent for the United Kingdom—R. J. REUTER (from KROHN BROTHERS & Co.), 62 NEW BOND STREET, LONDON, W.

SUPERFATTED ARISTOL SOAP.

In Psoriasis, Ulcus Cruris, Dermatomyces, Syphilitic Gummata, Ulcerating Lupus.

SUPERFATTED SULPHUR CAMPHOR, PERUVIAN BALSAM SOAP.

In Acne Vulgaris and Seborrhoea of the Body or Face.

SUPERFATTED SALICYLIC ICHTHYOL SOAP.

In Acne Vulgaris, Acne Rosacea and Eczema; also in the Massage Treatment of cases of Articular and Muscular Rheumatism.

SUPERFATTED THYMOL SOAP.

Recommended as a Pure Hygienic Soap for daily use, especially for children.

SUPERFATTED RESORCINE SOAP.

Seborrhoea, Parasitic Eczema and Erysipelas.

SUPERFATTED ICHTHYOL TAR SOAP.

Dermatomyces, Psoriasis, Chronic Palmar and Plantar Eczema.

SUPERFATTED MENTHOL EUCALYPTOL SOAP.

Urticaria, Prurigo, also in the Massage Treatment of Migraine, as well as a disinfecting soap for medical men, patients and their attendants (in infectious cases).

SUPERFATTED SALICYLIC SOAP.

SUPERFATTED SALICYLIC SULPHUR SOAP.

SUPERFATTED SALICYLIC SULPHUR TAR SOAP.

For the same cases as in the three first-mentioned soaps.

SUPERFATTED SUBLIMATE SOAP, $\frac{1}{2}$ AND 1 %.

As Disinfecting Soap.

SUPERFATTED BENZOIC SOAP.

A Sanitary Toilet Soap for Intertrigo, Scurf, &c.

SUPERFATTED PINE-NEEDLE EXTRACT SOAP.

In Massage Treatment of Rheumatic Affections and Parasitic Skin Diseases, also as a Disinfecting Soap for medical men, patients and attendants.

SUPERFATTED THIOL SOAP, 5 % AND 10 %.

In Parasitic Eczema, Mycosis, Acne Vulgaris, Acne Rosacea.

BEECHAM'S TOOTH PASTE.

All Chemists, Druggists, and Stores should Stock this new article, which is being well advertised, and, as it is a really good speciality, will shortly be in great demand. It is put up in collapsible tubes, retail price 1/-, and can be obtained from any Wholesale House.

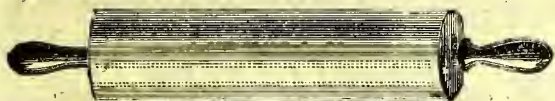
BEECHAM'S PILLS

The most saleable Patent Medicine in the market.

In Boxes 9 $\frac{1}{2}$ d., 1s. 1 $\frac{1}{2}$ d., and 2s. 9d. each.

HOME RETAILERS desirous of exhibiting Iron Tablets, Showcards, or Dummies, and wishful to have a good supply of Handbills, Beecham's Oracles, Music, &c., are requested to notify their requirements to the Proprietor,

THOMAS BEECHAM, St. Helens, LANCASHIRE



PROVISIONAL PATENT, No. 1111.

A1 "ROLLER" MENTHOL.


The most sensible pattern yet brought out, as it won't break! 3/6 dozen carded.

The Chemist and Druggist says:—"Messrs. Shirley claim that it is so strong that if accidentally dropped it does not break—an assertion of which we have proved the correctness by repeatedly dropping the cone upon the floor from a height of 6 or 7 feet. The cone shape, in which Menthol is generally made, easily breaks, and much of it is therefore wasted, whereas the rolling-pin shape may be used right up to centre."

Above evidence is sufficient to show this is the best shape yet brought out.

	Doz.		Doz.
No. 107F.—Good 3d. Pedestal, 1 doz. on a card	1/10	No. 8P.—6d. Boxwood, Acorn shape	3/3
No. 109.—" 4d. " 1 doz. in box	2/6	No. 111.—1s. " "	5/-
No. 117.—Monster 6d., 1 doz. in box	3/3	No. 40.—6d. " Watch shape	3/3
No. 113R.—Reversible Boxwood, 1 doz. in box	3/6	No. 17F.—1s. " Flat	5/-
No. 113P.—Printed Skittle, 1 doz. in box	3/6	No. 9CR.—1s. " Reversible	4/6

1d. Lines, 6/- and 6/6 per gross. 2d. Barrel or Pedestal, 14/- per gross.


 £2 Parcels, assorted. Charming China Figure of "Justice" given away to assist Sale. Pretty little Glass Show Case given away with 15/- order.

CORN SOLVENT.

in Actinic Bottles, fitted with Boxwood Cork and Brush, carded, 2/6 per dozen.
Bottle, Cork, and Brush, empty, 1/- per dozen.



SOOTHING TEATS.

 67 'Adapted'	1d. Line, 3 doz. on card	...	...	...	7/6 gross.	3d., 1 doz. on card, bone mount	...	...	1/10 dozen.
	2d. " "	...	...	...	14/- "	4d., " "	...	...	2/4 "
	3d. Bone "	...	...	...	17/- "	6d., " "	...	...	3/6 "
	3d. Rubber "	...	...	...	17/- "	6d., Vegetable Ivory Whistle and Ring	...	...	3/9 "
	3d. 'Adapted' "	...	...	...	2/- dozen.	6d., 'Fascinators'	...	...	3/6 "
						6d., 'Adapted,' with Bone and Rubber parts	...	...	3/9 "

SMELLING BOTTLES, &c. 23s. Worth for 20s. SPECIAL BARGAINS.



No. 324.

No. 324.—This is a Watch shape, containing in gold-glass exact facsimile of Jubilee Sovereign	...	3/9 dozen.
No. 309.—Charming Line, hand-painted glasses and camoes in face	... ..	3/9 "
No. 328.—Flask shape, assorted colours, metal screw cap	... ..	16/- gross.
" " " " " filled	... ..	21/- "
No. 313.—Globe shape, with two stoppers, quite air-tight, very prettily cut	... ..	12/6 dozen.
No. 330.—Large wide-mouth bottles, assorted colours, globe stoppers, for Lavender Salts, wonderful value	... ..	3/6 "
No. 331.—China Globe, wide mouth, for Salts, assorted decorations, colours, and gilt	... ..	4/- "
No. 316.—English Stoppered Globe, handsomely cut, for Perfume, &c., &c.	... ..	20/- "
English-made Bottles in variety. Special Lists on Application. £1 Assortment sent.		

English-made Bottles in variety. Special Lists on Application. £1 Assortment sent.

SMELLING BOTTLES IN PURSES. 4/-, 7/-, 8/- doz.; also with Chatelaine attached, 10/6 doz.

A1 TOOTH SOAP, on Easel Card, 3/6 doz. Very attractively got up.

PUFF BOXES

Capital Lines from 2/3 doz. upwards. Also TURNED WOOD BOXES of every description. Fancy covered 3-inch Puff Box, 3/9 and 4/- doz.; 4-inch, 7/.

AND

REALLY CHARMING GOODS.

TURNERY.

SPECIAL LIST ON APPLICATION.

SPRAYS. 6d., 4/- doz; 1s. 8/- doz.; other sizes, 13/-, 17/-, 28/-, &c. PUMPS from 18/- upwards.

ETIENNE FRÈRES' PERFUMES.

1d. Tubes	8/ gross.	6d. $\frac{1}{2}$ oz. Lundborg's	3/6 doz.
2d. Bottles	14/ "	1s. Lundborg's stoppered, 1 oz.	8/ "
3d. Sprinklers	2/ doz.	2 oz. " " " " " " " " " "	13/ "
		4 oz. " " " " " " " " " "	24/ "
(All above carded)		1 oz. Fancy Bottles... ..	8/ "
6d. Ring Bottles, stoppered	4/ doz.	1 oz. Heavy Essence, cut stopper... ..	8/ "
6d. $\frac{1}{2}$ oz. Essences, sprinkler	3/9 "	1d. Eau de Cologne	8/ gross.
6d. $\frac{1}{2}$ oz. " capped	3/6 "	3d. Eau de Cologne	1/10 doz.

(All above carded)

6d. Ring Bottles, stoppered 4/ doz.

6d. $\frac{1}{2}$ oz. Essences, sprinkler	3/9 "
---	-----	-----	-----	-------

6d. $\frac{1}{2}$ oz. " capped ... 3/6 "

6d. 1/2 oz. Lundborg's	3/6 doz.
------------------------	-----	-----	-----	-----	----------

1s. Lundborg's stoppered, 1 oz.	8/	..
---------------------------------	-----	-----	-----	----	----

2 oz. " " 13/ "

4 oz. " " " " " "	24/ "
1 doz. Paper Bottles	8/ "

1 oz. Fancy Bottles...	...	...	...	...	8/	..
1 cz. Heavy Essence, cut stopper...	...	...	...	...	8/	..

1d. Eau de Cologne	8/	gross
--------------------	-----	-----	-----	-----	----	-------

3d. Eau de Cologne	1/10 doz.
--------------------	-----	-----	-----	-----	-----------

ARTHUR W. SHIRLEY, 55 Farringdon Road, LONDON, E.C.



Dorothy Dentifrice ^{3d.} PER PACKET.

An Ideal Tooth Powder.

The Dorothy Dentifrice is most attractively put up, and sells readily at sight. It is being extensively advertised in the best publications of the country, and a brisk demand may be expected by the trade. I trust that dealers will think well enough of the preparation to stock it, and give it a good showing on their counters and windows. It is a profitable line to stock, and is not cut.

Full particulars of Agencies will be sent to applicants by the Proprietor,
ROSCOE C. SPURIN, 11-13 St. Bride Street, LONDON, E.C.

THE CHEMISTS' AND DRUGGISTS' DIARY, 1893 IS NOW IN PREPARATION.

For Advertisement Tariff, and full particulars, apply to
THE PUBLISHER, 42 CANNON STREET, LONDON, E.C.

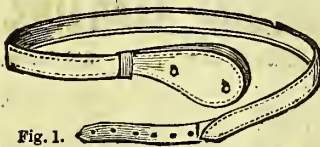


Fig. 1.

ESTABLISHED 1830.

TRUSSES.



Fig. 2.

The Best and Cheapest Trusses of all kinds in the Wholesale and Export Market are manufactured by

LINDSEY & SONS

ELASTIC STOCKINGS, SUSPENDERS, AND SURGICAL BANDAGES OF ALL KINDS.

WHOLESALE AND EXPORT. THE LARGEST SHIPPERS IN THE TRADE.

ILLUSTRATED PRICE LIST POST FREE TO ANY ADDRESS.

32 LUDGATE HILL, and 40 GRACECHURCH STREET, E.C.



VINCENT WOOD,

Bona-fide Makers of High-class

Trusses, Abdominal Belts,
Chest-expanding Braces,
Riding Belts, Suspensory
Bandages, Galvano-Electric
Belts, Corsets, & Appliances,
Magnetic ditto, Chest Protec-
tors, & Surgical Appliances.

THE CHEAPEST, BEST, & LARGEST
HOUSE IN THE TRADE.

Circulars, Statuettes, &c., supplied Free.

3 St. Andrew's St., Holborn Circus

(Adjoins Church).

LONDON, E.C.

New Brace and Belt com-
bined, for Youths & Gents. Estab. 1840. Telegrams—"Acme London."

Trade Mark,



Registered.

THE
ASSOCIATION for the SUPPLY of PURE VACCINE LYMPH

12 Pall Mall East, LONDON, S.W.

SOLE AGENTS FOR

DR. WARLWORTH'S CALF VACCINE

Tubes, 2s. each; Half Tubes, 1s. each. Pomade in vials, 5s.

HUMAN VACCINE, from healthy children only, microscopically examined
source quoted. Tubes two-thirds full, 1s. 8d. each; Tubes one-third full
Lancet-charged points, 1s. each; Pin-points, 1s. 1d. each. Eighteen charged
Points, 5s. Tubes two-thirds full (same as those mentioned above, but with
source) in quantities for export, 25 per 100 Tubes. Pin-points uncharged, 1s.
dozen. Vaccine Ejectors, 1s. 3d. each, including postage. Vaccinations by ap-
pointment. F.O.O.s (including postage, and crossed London and Westminster Ba-
nk orders, payable to **EDWARD DARKE, Secretary**

Office hours, 10 to 4. Saturdays 10 to 2.

BREFFIT'S

"LA SPECIALITE"

FEEDING BOTTLES.

NEW SERIES
TO MEET THE PREVAILING TRADE COMPETITION.

FITTED WHITE RUBBERS

No. 85.—Green Glass Bottle, Wood-top Cork	...	...	...	...	21/- per gross.
" 86.—White "	"	"	"	...	23/- "
" 87.—Green Glass Bottle, SCREW GLASS STOPPER	...	...	...	...	24/- "
" 88.—White "	"	SCREW GLASS STOPPER	...	...	26/- "

FITTED BLACK RUBBERS

No. 89.—Green Glass Bottle, Wood-top Cork	...	...	...	...	23/- per gross.
" 90.—White "	"	"	"	...	25/- "
" 91.—Green Glass Bottle, SCREW GLASS STOPPER	...	...	...	...	26/- "
" 92.—White "	"	SCREW GLASS STOPPER	...	...	28/- "

IN QUANTITIES OF NOT LESS THAN ONE GROSS OF A KIND.
EACH BOTTLE IN PAPER BAG.

PLEASE QUOTE NUMBER IN ORDERING.

SEND FOR OUR NEW ILLUSTRATED PRICE LIST, JUST ISSUED.

Special attention is drawn to above Quotations for

SCREW STOPPER SERIES

Nos. 87, 88, 91, and 92.

We supply over 100 Various Kinds Attractive Feeding Bottles.

EVERY CLASS AND DESCRIPTION

BOTTLES & GLASSWARE.

OFFICES & SHOW ROOM—83 UPPER THAMES ST., LONDON.

GLASS BOTTLES.

TO WHOLESALE AND EXPORT BUYERS.

DISPENSING BOTTLES of best quality, in White Flint or all the best and newest tints. **VIALS**.—White Flint or Coloured, in all shapes and sizes. **FEEDING BOTTLES**.—Plain mouths or Screw Stoppers, in White or Green Flint. **LIME CREAMS AND KALIS** of all sizes. **ESSENCE BOTTLES** of every description, Plain or Stopped. **MALT EXTRACT BOTTLES**, in Actinic Green, Amber, Dark Blue, or White Flint.

TO FOREIGN AND COLONIAL BUYERS.

Having recently erected spacious Warehouses, we are enabled to give special attention to packing Goods for Export. Only experienced Packers employed.

E. A. HEARN & CO., WHOLESALE & EXPORT GLASS BOTTLE MANUFACTURERS, ECLIPSE GLASS WORKS, CHATSWORTH ROAD, CLAPTON, LONDON, E.

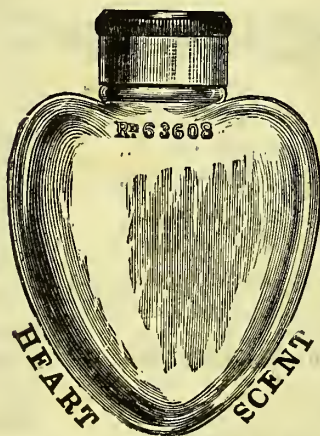
BOTTLES

Write for revised Price List of Dispensing Bottles, &c.

SAMPLES ON APPLICATION.

Special Quotations for Large Quantities.

E. YOULDON,
EAST LONDON GLASS BOTTLE WAREHOUSE
36, 38, & 40 Great Garden Street.
WHITECHAPEL, LONDON, E.



R. H. BARRETT,

Flint Glass Bottle Works,
99 THE OVAL, CAMBRIDGE HEATH, LONDON, E.

THE HEART SCENT BOTTLE (Reg.), for Salts or Perfume

Is most admirably adapted for pocket use, combining great beauty of design with the maximum of convenience.
Price, Plain or Fluted (in 5 GROSS lots):—12/6 per gross. Assorted WHITE and COLOURED.
N.B.—The Caps for these will be fitted, if desired, with indestructible washers, to resist the action of ammonia, which destroys cork in a short time.

METAL SCREW-CAPPED LIMES, in White Flint, Actinic Green, or Amber
The Best Bottle for Glycerine or Pills. Prices: 1 oz. 13/6, 2 oz. 15/-, 3 oz. 18/-, &c. per gross.

Chemists' and Perfumers' Bottles in great variety, Plain or Stopped.

Orders may be sent to the **PRINCIPAL WHOLESALE HOUSES.**

TELEGRAPHIC ADDRESS—"FOREFRONT LONDON."

[3]

Registered Trade Mark.

BEST FLINT DISPENSING
BOTTLES, WHITE, BLUE, OR
GREEN TINT, AMBER
AND ALL OTHER
COLOURS.



Number 26866.

HAND MADE SHOP-ROUNDS.
OPAL, FLINT, AND
TURQUOISE BOXES.
SPECIAL ATTENTION GIVEN
TO PROPRIETARY
BOTTLES.

Owing to the steady and continuous increase in their business, and especially the enormous influx of trade they have experienced from Home and Colonial buyers during the last two or three years, the Proprietors of the above Brand of all shaped Dispensing and other Bottles have just completed an enlargement of their Works, which are now doubled in size, and capable of turning out very large quantities of Bottles at shortest notice.

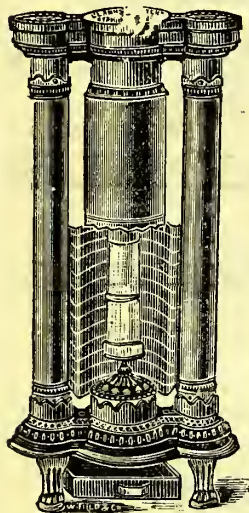
The "W" Brand productions can be obtained only through Wholesale London Houses.

TO CHEMISTS AND DRUGGISTS.

AGENTS WANTED FOR THE SALE OF
"THE SYPHON" (REGISTERED TITLE) **HYGIENIC CONDENSING GAS HEATING-STOVES**
 (CLARK'S PATENT).

A Necessary for all Invalids. A Comfort to Everybody.

NO FLUE REQUIRED. FREE FROM SMELL OR SMOKE.



All injurious vapours are reduced to harmless liquid inside the Stove, and passed out at foot into a tray provided for that purpose.

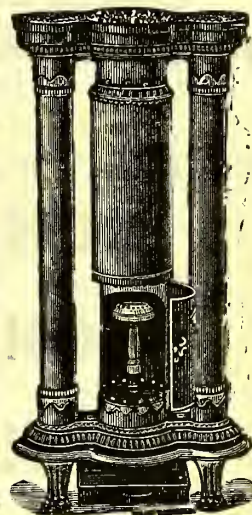
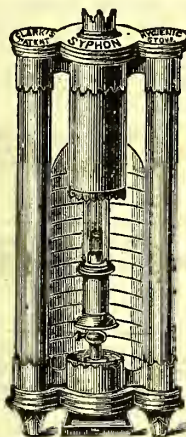
For use in Hospitals, Sick Chambers, Bedrooms, Halls, Conservatories, Schools, Shops, &c.



They give a Pure, Equable, and Agreeable Heat, which can be graduated and sustained at the will of the user.

Specially suitable for patients suffering from Bronchial affections, as a moist atmosphere is obtainable when required.

For Terms, Particulars, and Prices, apply to



S. CLARK & CO., Patentees and Makers, Syphon Works, Park Street, ISLINGTON, LONDON, N.

Telegraphic Address—"SYPHON STOVES LONDON." Wholesale Agents—Messrs. MAW, SON & THOMPSON, Aldersgate Street, London, E.C.

AS A POLISH THE CLEANEST. BRIGHTEST. AND BEST.

PYN-KA

THE POLISHING TABLET (Unsurpassed). AWARDED GOLD MEDAL.

Cleans with a Brilliant Polish Brass, Copper, Silver, Gold, White and other Metal, Electroware, Glassware, and other domestic articles. For Restaurants, Hotels, Bars, and Biocyclists.

TESTIMONIAL FROM A LADY.—"Your 'PYN-KA' Sample is the best I have tried, and we shall use no other cleaning preparation in our house. It will, I am convinced, supersede all other Polishing Pastes."

For Wholesale Terms apply to the Sole Vendors—

THE PYN-KA SYNDICATE, LIMITED, 41 LORD ST., LIVERPOOL.

THE WANT OF THE DAY!

NO MORE SOFT LINEN WHEN STARCHED.

Used in the Royal Laundries.

Should be used in Every House.

The Greatest Boon ever offered to the Laundress for imparting an IVORY-FINISH to Starched Linen, Laces, &c. It does not stick to spider-web-like materials.



REGISTERED No. 40,376.

Once Tried, Always Wanted.

Makes Old Linen like New.

From the Chief Laundress to H.R.H. the Prince of Wales:—West Newton, near Lynn, Norfolk, Aug. 29, 1879. SIR,—Having tried your "STARCH GLOSS," I certainly think it a great improvement—far superior to any I have tried. Yours truly,

To Mr. CRITCHLEY.

E. ELDER.

Sold by Chemists and Druggists, Grocers, Oilmen, &c., in Packets at 1d., 3d., 6d., and 1s. each.

PREPARED ONLY BY

T. CRITCHLEY, CHEMIST AND WHOLESALE DRUGGIST, BLACKBURN.

LONDON DEPOT—2 BEECH STREET, E.C.

PURE ORANGE WINE

(VINUM AURANTII, B.P.), prepared in strict accordance with the Formula of the British Pharmacopoeia.

MOST SUITABLE BASIS FOR QUININE AND OTHER MEDICATED WINES.

A. MILLAR & CO., DUBLIN; and 47 MARK LANE, LONDON, E.

Or of H. J. ROYDANT & CO., 75 Acre Lane, Brixton, S.W.

GENUINE EAU DE COLOGNE.

JOHANN MARIA FARINA, Gegenüber dem Laurenz Platz

Has the second largest sale amongst Chemists in the United Kingdom.

2 oz.
7/6

4 oz.
14/-

$\frac{1}{2}$ Pint Wicker.
21/-

Pint Wicker.
42/-

Quart Wicker.
84/- per doz.

Sole Agents—OSCAR MOENICH & CO., 8 Coleman Street, LONDON, E.

HIGH-CLASS WINES, PHARMACEUTICAL

HIGH-CLASS S.V.R., B.P.

HIGH-CLASS S.V.R., PERFUMERY.

REASONABLE PRICES.

STEPHEN SMITH & CO., BOW, LONDON, E

BEWARE OF COPYISTS.

Established 1840.

AWARDED OVER 40 PRIZE MEDALS.

THREE
GREAT

Day & Sons, Crewe.

ANIMAL
MEDICINES

THE "PURIFIED" DRIFFIELD OILS,

Commonly called "Day's Oils,"
"Day's Black Oils."

For Wounds of all kinds in all animals.
For Saddle & Stake Wounds & Cracked Heels.
For Sore Teats and Swollen Udders in Cows.
For Anointing in bad Lambing and Calving.

Price 2s. 6d. and 6s. per Bottle.



BEWARE OF COPYISTS.

THE RED DRINK

OR
COW DRENCH.

Cures Fever and Costiveness in Cattle.
Cleanses and Cools the Blood and System.
For Red Water, Indigestion, and Yellows.
Cures Bad Cleansing & prevents Milk Fever.

Price 12s. per dozen Packets.

The "EWE DRENCH" acts as
above for Sheep. 3s. 6d. per doz.



What's Good for Rheumatism?

DAY'S OIL OF THE NIGHT.

The People's Embrocation for Sprains, Muscular Weakness, Rheumatism, Lumbago, Cramp, Sore Throat from Cold, Sciatica, &c., and all Aches, Pains, and Soreness.

Send for "Day's Oil of the Night" terms, framed to prevent CUTTING.

CHEMISTS CAN HAVE A SINGLE BOTTLE DIRECT.

Price 1s. 11d. and 2s. 9d. per Bottle.

DAY & SONS, CREWE, CHESHIRE.



S^{0/56} V^{0/60} R
19/4 19/10

PERFECTLY PURE.

FIT FOR ANY PURPOSE.

PURE ORANGE WINE.

S^{0/61} V^{0/64} M

AT LOWEST PRICES.

Special Terms to Large Buyers.

PURE GINGER WINE.**FOREIGN WINE AND SPIRIT MERCHANTS.****SOLE PROPRIETORS OF THE FAMOUS "GLENALLAN" PURE MALT WHISKY.**Per doz. **42/-** Per doz. THE CREAM OF SCOTCH BLENDS. Per doz. **42/-** Per doz**BOORD & SON,****DISTILLERS, FOREIGN WINE AND SPIRIT MERCHANTS, AND METHYLATORS, ALLHALLOWS' LANE AND BARTHOLOMEW CLOSE, LONDON, E.C.**Quotations for **S.V.R.** Methylated Spirit and Finish on application.**FINEST ORANGE WINE FOR QUININE**

JAMES BURROUGH, **S^{56 o.p.} V^{60 o.p.} R**

CALE ST., CHELSEA, S.W.

and Methylated Spirit

AT LOWEST PRICES.

WRITE FOR QUOTATIONS

DAY, SON & HEWITT'S
NEVER FAILING HORSE, CATTLE & SHEEP MEDICINES.

THE CHEMICAL EXTRACT.

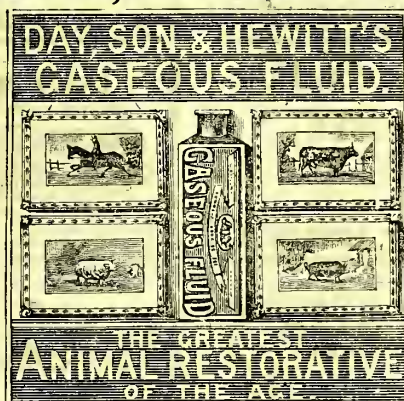
For Kicks, Cuts, Bruises, Sore Withers Swellings, Strains of Ligaments and Tendons, Saddle Galls, &c. It rapidly relieves Straining and Pain after Calving and Lambing, and is the remedy for Swollen Udders and Sore Teats.

Price 2s. 6d., 3s. 6d., and 7s.
per Bottle.

THE CASEODYNE,

Used as Laudanum for parturition in Mares, Cows, and Ewes, when there is great pain exhibited with feverish symptoms. Highly beneficial for Inflammatory Colic, or Enteritis, and for severe forms of Diarrhoea.

Price 3s. 6d. per Large Bottle.



For Fret, Colic, or Gripes in Horses. Hoven or Blown Sheep, and General Debility in Stock; of exceptional value for Colds, Chills, Scour, Diarrhoea, and weakly Lambs and Calves.

Price 1s. 9d. per Bottle, 20s. per doz.

THE RED DRENCH.

For Colds, Indigestion, Costiveness, Yellows, Surfeits, Loss of Cud, Pleurisy, Hide-bound, Red Water, &c. Admirably adapted for cleansing and checking feverish symptoms in Cows and Ewes after a bad time of Calving or Lambing.

Price: for Cows, 13s. per doz.; for Ewes, 3s. 6d. per doz.

THE BRONCHOLINE.

For Husk or Hoose in Heifers, Calves, Sheep, and Lambs, also Tape-worms in Teds. No parasite can exist in the windpipe or air-passages after the blood has been impregnated with this worm-destroying medicine.

Price 2s. 6d. per Bottle.

THE ORIGINAL STOCK-BREEDER'S MEDICINE CHESTS,

For Horses, Cattle, and Sheep. Prices, £1 8s. 9d. and £2 16s. 6d.

THE ORIGINAL HORSE-KEEPER'S MEDICINE CHESTS,

For all ailments in Horses. Prices, £1 10s. and £2 17s. 6d.

ROYAL ANIMAL MEDICINE MANUFACTORY, 22 DORSET ST., LONDON, W.

Liberal Discount to Foreign Buyers.

Trade Terms and full particulars on application.

Attractive Show-cards and Handbills sent with each order.

HORN & SON
OFFICES FOR BRITISH AND FOREIGN
PATENTS AND TRADE MARKS,
SOMERSET CHAMBERS, 151 STRAND, LONDON
(NEXT TO SOMERSET HOUSE).
Guide to New Patent Law and Registration gratis.

BALM OF BETHESDA
CURES
TENDER FEET,
Relieves Hot, Tender, Chafed, or Swollen Feet, softens Hard Blisters, renders the Feet pliant and elastic. Thousands of Testimonials.
Retail at 1/1 $\frac{1}{2}$ and 2/9 per bottle.
Wholesale Agents—Messrs. Butler & Crispe. Show-cards & literature supplied.

HAND-PICKED GUM ARABIC.
Wholesale and Export Druggists before buying elsewhere should apply to
FREDK. FINK & CO.
10 & 11 MINCING LANE, LONDON, E.C.

MORISON'S PILLS,
POWDERS, AND OINTMENT.
WHOLESALE—
33 EUSTON ROAD, LONDON.

BURNS EMBROCATION
The favourite rubbing for Athletes, Cyclists, and Sportsmen.
1/1 $\frac{1}{2}$, 2/9, and 4/6; 10/, 24/, and 40/- per dozen net.
Of all London Wholesale Houses, or direct from
H. BURN, 7 to 9 Gresham St., LONDON, E.C.
1 doz. 1/1 $\frac{1}{2}$ sent carriage paid in United Kingdom for P.O. 10/.

A NOVEL IDEA. VERY PROFITABLE.
TOM BROOKS'S "SANOSCENT"
Is a Solid Perfumed Disinfecting Tablet, retaining its virtue for years. Exhales sweet, balsmy odour. Eradicates Fleas and Moths. Each in a Japanese Basket. Retail 2d., or 4 baskets in outer for 6d. Trade 12s. gross, $\frac{1}{2}$ gross Carriage paid. Sample 2 doz., Post Free, 2/-.
TOM BROOKS, CHEMIST, HORNSEY, LONDON, N.



INDIARUBBER STAMPS
For all purposes and in all styles.
Self-Inking Stamps, as Illustration, from 2/ each.
Chemists' Prescription and Dating Stamp
of all kinds, Brass Seals for Wax, Stenells,
Dies, &c. Price and Pattern Sheets post free.
J. BERKLEY, 8 LIVERY ST., BIRMINGHAM.

POWELL & BARSTOW
(LATE W. HURLESTONE & CO. ESTABLISHED 1830.)
Manufacturers, on the premises, to the Wholesale and Export Trade, of every description of Elastic Gum.
SURGICAL INSTRUMENTS AND ELASTIC STOCKINGS,
Catheters, Bougies, Esophagus Tubes, Horse Catheters, Ferguson's Glass Speculums, Rectum Bougies, &c.,
58 BLACKFRIARS ROAD, LONDON, S.E.
SAMPLES AND PRICES ON APPLICATION.


PRECIPITATED CHALK, WHITEST PUREST
CHEAPEST SELLERS IN THE MARKET.
ALSO CHEMICALS, DRUGS, AND OILS
APPLY TO
AUG. LEVERMORE & CO., 8 LIME STREET, LONDON,

EADE'S
GOUT and RHEUMATIC PILLS
Are the safest and most effectual remedy advertised for
GOUT, RHEUMATISM, AND ALL MUSCULAR PAINS
GEORGE EADE, 72 GOSWELL RD.,
Counter Bills and Show Cards on application.

BUSH'S LIQUID BEE
(REGISTERED).
Please note Signature across Registered Label—*A.P. Bush & Co.*
Of all Wholesale Houses, or direct from Sole English Depot,
A. P. BUSH & CO., 1 Gresham Buildings, LONDON,
Showcards, &c., on application.

FINEST CRUSHED LINSEED
£15 per ton, 17s. per cwt., 9s. per 56 lbs., in bags
27s. for 36 2-lb. Tins; carriage paid within 200 m.
WALTER GRAHAM & CO.
PURVEYORS TO HER MAJESTY,
HEADLEY OIL MILLS, GREENWICH.

THE
"WORSTADT" **Cachets**
Are the most digestible, flexible, and elegant Cachets in the market, and are fast replacing all competitors. The Cachets are made to hold 3 to 18 $\frac{1}{2}$ grains Quinine or Salicylic Acid.
"MORSTADT" CACHET CLOSING APPARATUS, to easily, quickly, and speedily close 12 Cachets at one operation, from 12s. to 30s.
SMALL APPARATUS, to fill and close 1 Cachet at a time, 2s. 6d.
THOMAS CHRISTY & CO., 25 Lime St., London.

"SILVERY WHITE GUTTA PERCHA ENAM
TRADE MARK,
TOOTH STOPPING

P. A. STEVENS, Surgeon-Dentist,
72 MANSFIELD ROAD, N.W.,
SOLE PROPRIETOR AND MANUFACTURER.
Registered—No. 3745.
Special Terms to Wholesale Houses for Sheet or Sticks stamped with their own
A sample box of 3d. sticks sent post free for 12 stamps. Price list and sample

Supplied in Original Bottles ready for
Patient's use (stamped), to retail
each; also in 1-lb. Bottles for Dispensing
by the Sole Manufacturers:—
Fletcher's
Hydrobromates
Fletcher, Fletcher & Stevens
21 Mincing Lane, London, E.C.

PUREST CHLOROFORM
Guaranteed free from all injurious impurities.
Purest in the World.
SEND FOR ANALYSIS AND TESTIMONIALS.
SALAMON & CO., LD., CHEMICAL MANUFACTURERS,
RAINFHAM, ESSX.

TRADE MARKS

And DESIGNS Registered in England and Abroad.
charges Moderate. Reliable information and advice free. Searches made and reported. Fifteen years' experience. Address—
J. J. WILDBORE, Manager **TRADE MARK UNIVERSAL REGISTRATION AGENCY**,
Chiswell House, 133-139 Finsbury Pavement, LONDON, E.C.

TO LET.

RAYBOULD'S FURNITURE POLISH

BRIGHTENS FURNITURE WITH LITTLE LABOUR.

In Tins—1d., 7/- gross. Stone Bottles—1d., 8/- gross; 3d., 2/- dozen; 6d., 4/- dozen; 1s., 7/- dozen. It is sure to please and increase your trade. Every Chemist should send for Sample order, 6 dozen assorted as required, Carriage Paid, P.O.O. or Cheque, payable to

FLESHER RAYBOULD, REFORM WORKS, DUDLEY.

FIRST EXTRACT LEMON OIL,

Absolutely pure. Nothing finer imported.

53 per lb. c.i.f. Hull, London, or Liverpool, delivered as required up to June, 1893.

MARK LEWIG, 23 Old Corn Exchange, MANCHESTER, and in LIVERPOOL and LONDON.

DIRECT AGENT FOR LARGEST CONTINENTAL HOUSES.

CHOLERA

ESSENCE AND PILULES OF

PER **3/6** DOZ.

ONE SHILLING SIZE.

Order immediately from **WATSON & WATES**, 93 Leadenhall Street, LONDON, E.C.

!!! CAMPBOR

(DR. RUBINI).

Daily Telegraph, Saturday, August 27, 1892:—

"1. If you suspect the case is one of cholera, send for a doctor. 2. Give four drop doses of *Essence of Camphor* every ten minutes for an hour, until there is some improvement. If you have not the *Essence*, use *Camphor Pills*."

BATTLEY & WATTS,

MANUFACTURING CHEMISTS, WHOLESALE & EXPORT DRUGGISTS, CRIPPLEGATE, LONDON.

EXTRACTS & LIQUID EXTRACTS A SPECIALITY.

LISTS SENT POST FREE ON RECEIPT OF BUSINESS CARD. PLEASE COMPARE PRICES.

GENUINE EMERY, EMERY CLOTH, AND BLACK LEAD.

JOHN OAKLEY & SONS,

MANUFACTURERS OF

Glass and Flint Paper, Emery and Glass Cloth; Emery, Black Lead, Emery Wheels, Pumice, Putty Powder, Crocus, Urn Powder, Tripoli, Rouge, Plate Powder, Steel Polish, Furniture Polish, Knife Boards, Brunswick and Berlin Black, &c.

OAKLEY'S WELLINGTON KNIFE POLISH

Prepared expressly for Oakley's and other Knife Boards, Buff Leather Boards, and all the Patent Knife Cleaning Machines. Sold in Canisters with perforated Tops to prevent waste, at 1d., 2d., 3d., 6d., 1s., 2s. 6d., and 4s. each.

OAKLEY'S NON-MERCURIAL SILVERSMITH'S SOAP,

For Cleaning and Polishing Silver, Plate Glass, Marble, &c. Tablets, 6d. each.

OAKLEY'S "POLYBRILLIANT" (REGISTERED).

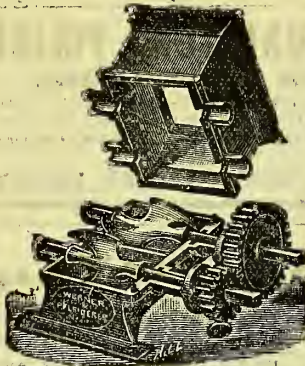
A Magic Pomade for Cleaning Brass, Copper, Tin, Pewter, Britannia Metal, &c. Never becomes dry and hard like other Metal Paste. Tins, 1d., 2d., 3d., and 6d. each.

WELLINGTON BLOCK BLACK LEAD,

In 1d., 2d., and 4d. Blocks, and 1s. Boxes.

WELLINGTON EMERY & BLACK LEAD MILLS, Westminster Bridge Road, London, S.E.

Highest Award and Prize Medal, Philadelphia Exhibition, 1876; and Boston 1883. Gold Medal, Crystal Palace, 1884.



Size 3, Type I, for 1-lb. Mass.

THE "UNIVERSAL" KNEADING AND MIXING MACHINE

Pill Cutting, Pill Rounding, Pipers, and all other Machines for

PILL MASS MAKING,

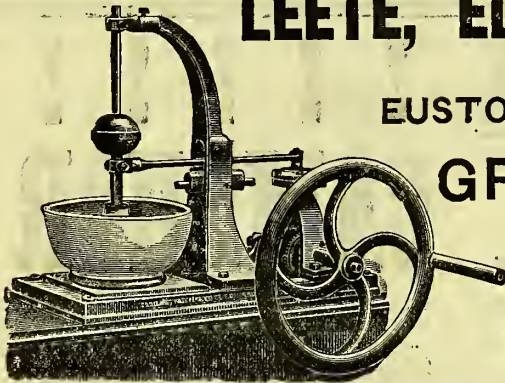
Also for Horse Balls, Tooth Pastes, Ointments, Soaps, Powders, and for general Mixing, Incorporating, Sifting, and Straining.

REPLACES WITH ADVANTAGE ALL OTHER APPLIANCES FOR THESE PURPOSES.

Made in various sizes, to do from $\frac{1}{4}$ lb. up to 1 ton at a time.

WERNER & PFLEIDERER, 117 QUEEN VICTORIA ST., E.C.

Contractors to the War Offices of all the Great Powers and other Governments.



LEETE, EDWARDS & NORMAN, LTD.

ENGINEERS,

EUSTON ROAD, LONDON, N.W.

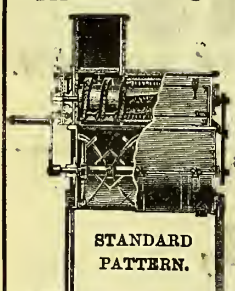
GRINDING, LEVIGATING,

AND MIXING MACHINES.

(GOODALL'S PATENT.)

PUMPS—For Semi-Fluids,
Chemicals, &c.

Use GARDNER'S Patent
'RAPID' SIFTERS & MIXERS
For Sifting and Blend-
ing every kind of Dry
Powders.
New Illustrated Catalogue on
application to
WM. GARDNER,
Engineer, &c., Gloucester.



STANDARD
PATTERN.

GLASS BOTTLES

GOOD AND CHEAP.

Before ordering of any other house, write for sample
of our

NEW SHAPE FLATS

WITH ROUNDED EDGES.

6 and 8 oz., 8/6 per gross.

3 " 4 " 7/6 "

PLAIN OR GRADUATED.

THE ORDINARY SHAPE THE SAME PRICE.


I. ISAACS & CO., Glass Bottle Manufacturers

25 Francis St., Tottenham Court Rd., LONDON, W.C.

Established 50 Years. Bankers—London and Westminster Bank.

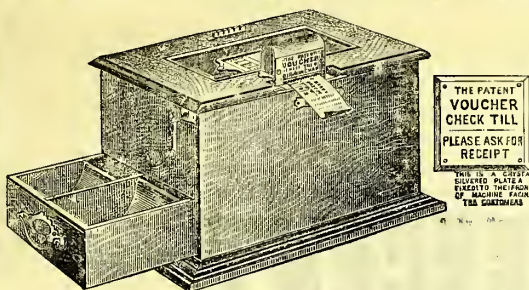
From Stock
in London or
direct from
the Works.

IT WILL PAY YOU TO
SEE **TOWNSEND'S**
1893
ALMANACKS
BEFORE PLACING YOUR ORDERS.
NEW DESIGNS & NOVELTIES.
TOWNSEND'S HIGH-CLASS HANDBILLS.
BEFORE ORDERING ANY KIND OF PRINTING SEND FOR PRICES TO
JAMES TOWNSEND, Medical Label Printer, Exeter.



James Townsend
Medical Label
Printer
Exeter

THE PATENT "VOUCHER" CHECK TILL.

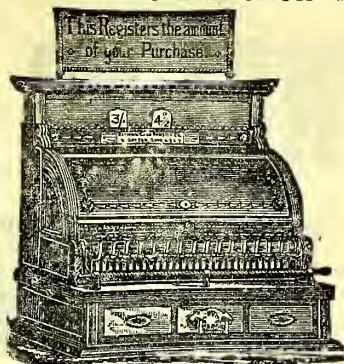
Absolute Security and
Effective Advertising Medium.

WHAT USERS SAY OF IT.

"The best Check Till extant."—"Balance exact."—"Very superior to other systems."—"Saves a lot of expense."—"Not seen its equal as a check." Testimonials and Prices from

THE PATENT VOUCHER CHECK TILL CO., LIM.
Burlington Chambers, New Street, BIRMINGHAM.

A NATIONAL CASH REGISTER TILL



Is a Never Tiring Sentinel, a Silent Monitor, a Faithful Guardian, a Devoted Friend, a Hardworking Partner, a Correct Cashier, and a Never-Mistaken Bookkeeper.

It is Perfect in Make, Perfect in Action, Perfect in Finish, and Perfect in Results.

Please Call and Examine at our London Offices and Show-rooms,

356 STRAND, W.C.

Or send us a Post-Card, and one of our Representatives will call on you with a Sample Register and explain our System.

OVER 47,000 IN USE IN VARIOUS PARTS OF THE WORLD.

GEORGE TREBLE & CO.

SHOP FITTERS & SHOW-CASE MAKERS,

Chemists waited upon in any part of the United Kingdom. Plans and Estimates supplied free of charge.

59 RHODES STREET HOLLOWAY, LONDON, N.

PRIZE MEDAL,
International
Health Exhibition,
1884.

THE NEW PERMANENT

ENGRAVED WINDOW TABLETS

AWARD OF MERIT
International
Sanitary Exhibition,
1881.

IN RUBY, BLUE, AMBER, AND OPAL GLASS.

Send particulars of size, subject matter, and colour, when price for one Tablet and upwards will be sent.

For Proprietary Articles, 100 8x6 Ruby Tablets, £3 15s. 0d.

J. R. CORSAN, THE LONDON SAND-BLAST WORKS, 80 GRAY'S INN ROAD, W.C.

TO PREVENT FRAUD, DEMAND BUSINESS CARD FROM TRAVELLERS.

PATRONISED BY HER MAJESTY.

BARBER'S ORIGINAL

CRIMSON MARKING INK,

WHICH IS CHANGED BY HEAT TO A JET BLACK.

Put up for Retail Sale in 6d., 1s., 2s., 2s. 6d., and 5s. Bottles.

ALSO

BARBER'S CONCENTRATED LIQUID COCHINEAL

FOR COLOURING JELLIES CUSTARDS, ETC.

Put up in 6d. and 1s. Bottles.

ALSO BARBER'S ARTIFICIAL IVORY FOR FILLING DECAYED TEETH,
1/- per Packet.

MANUFACTURED ONLY BY THE PROPRIETORS—

G. BARBER & CO., CLUB MOOR, LIVERPOOL.

Can be obtained through any of the Wholesale Firms in Great Britain, or from FELTON, GRIMWADE & CO., Melbourne; ELLIOT BROS., Sydney and Brisbane; KEMP THORNE, PROSSER & CO., Dunedin and Auckland; FELTON, GRIMWADE & CO., Wellington; or direct from the Manufacturers—G. BARBER & CO., Club Moor, Liverpool, England.

GRANULAR



EFFERVESCENT

PREPARATIONS

We have recently put down a complete Plant for the Manufacture of the above, and beg to submit the following Prices to the Trade:—

CITRATE OF MAGNESIA.						In Bottles, 1 lb. and upwards.	In 28-lb. Tins.
						per lb.	per cwt.
	Quality A,	<i>very superior</i>	...	...	...	1/6	130
"	"	B,	<i>superior</i>	...	...	1/-	75
"	"	C,	<i>usual quality</i>	...	...	10d.	70
"	"	D,	<i>good saleable</i>	...	...	9d.	65
"	"	Raspberry Flavour,	tinted	...	...	1/2	80
"	"	Lime Fruit Flavour	...	...	...	1/2	80
"	"	Lemon Flavour	...	...	...	1/2	80

CITRATE OF MAGNESIA, in 6-oz. Bottles with Boxwood Top Corks or Patent Stoppers, 36/- per gross net.

FREE SAMPLES ON APPLICATION.

T. HOWARD LLOYD & CO.

Wholesale and Manufacturing Chemists,
86 High Street and Town Hall Lane, LEICESTER.

Principal: T. HOWARD LLOYD (eighteen years partner in the firm of JOHN RICHARDSON & CO., LEICESTER). [2]